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THE

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A MONTHLY JOURNAL

OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

EDITED BY

J. L DAVISON, B.A., M.D., C.M., M.R.C.S., E.
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THE CANADA LANCET

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

Original Communications.

NOTES FROM CASES OF ABDOMINAL SECTION, WITH REMARKS.*

BY H. MEEK, M.D.,

Fellow of Brit. Gyn. Soc., Eng., and Gynæcologist to London Gen. Hosp., London, Ont.

CASE I.—Dermoid cyst of left overy with small dermoid cyst in right overy.

Patient referred to me by Dr. Moorehouse, London, January 28th, 1893, single, æt. 29 years, had been suffering for past five years from backache, tired feeling and pain in left inguinal region, pain in side worse when at stool and walking; menstrual periods every three and a-half weeks, and flow more than normal.

She had consulted Dr. Moorehouse two years previous, when he made a pelvic examination and found a lump low down on left side of uterus, which he thought was a large ovary. She then consulted another physician, who examined and told her she had a myoma of uterus, and used electricity for a time, with no benefit. She again returned to Dr. Moorehouse, during the autumn of 1892, when he found lump had increased some in size. He strongly advised operation, and requested to have me examine patient with that view.

On January 28th, 1893, I examined and found abdominal examination negative. *Per vaginam*—Uterus forward to right side—enlarged—sound enters three inches, and blood follows removal of sound. Behind and to left of uterus a lump could be felt about as large as a good-sized orange—elastic, but not fluctuating; close to uterus it felt harder, and was somewhat tender on pressure; uterus moves with movement of tumor. It appeared to be closely connected with uterus by short pedicle.

Per rectum.—It was tender on pressure. The right ovary could not be felt at this examination. Diagnosis was between dermoid cyst of left ovary and myoma.

Operation February 7th, 1893, in City hospital; anæsthetic by Dr. Balfour, and assisted by Dr. Moorehouse, I made a rather long median incision. Abdominal wall was vascular. Exploration with fingers:—I found lump to be a semi-solid mass of left ovary, adherent in pelvis, and connected with uterus by a broad, thin, short pedicle. After separating adhesions, I lifted up tumor and plunged in a trocar, but contents, which were found to be sebaceous matter, hair and bone, would not, of course, run through. The contents were then pressed out through the opening made by trocar, being careful to prevent any getting into peritoneal cavity. Pedicle was then easily transfixed and ligated, and sac removed. The other ovary was found to be enlarged and cystic, and was therefore removed with the corresponding tube. Pelvic cavity was sponged out and abdomen closed without drainage. Recovery was uneventful. Right ovary was found to contain, besides a multilocular fluid cyst, a small dermoid cyst about as large as a hickory nut, the contents of which were sebaceous matter, hair and skin.

Remarks.—(1) A point to which I wish to direct attention in this case, and I presume it will apply to all cases of dermoid cyst of ovary where the tumor is wedged down in pelvis, is the difficulty of making a differential diagnosis, more particularly from myoma. The slow growth, the feel, the close connection with uterus, with enlargement of that organ and increased flow at menstrual periods, would quite easily mislead one. A myoma, however, is not usually tender on pressure, unless patient has had pelvic peritonitis, and the uterus as a rule, with myoma, is larger than it would be with dermoid cyst of same size.

(2) I think I have read somewhere in the experience of others, what in my own experience I have frequently observed, viz., that all tumors having a close connection with uterus, whether ovary, tube or broad ligament, and no matter whether fluid or solid, are usually accompanied by enlargement of uterus with increased flow at menstrual periods.

(3) With regard to frequency of dermoid cysts

*Read before the Ont. Med. Association, June, 1894.

of ovary being double, Doran in his work on "Tumors of Ovary and Broad Ligament," states, "that out of thirty-one cases of dermoid tumor of ovary he had seen, seven were double. Out of six or seven cases I have seen myself, this was the only case in which both ovaries contained dermoid cysts.

CASE II.—Hæmatosalpinx or ruptured tubal pregnancy of left tube, with encysted hæmatocele behind broad ligament, complicated by ventral hernia in cicatrix, following a previous abdominal section for tubal pregnancy of right side.

Patient referred to me by Dr. Weld, London, æt. thirty-seven years, married nine years, no children and no certainty of ever having been pregnant. Menstrual periods appeared at thirteen years, were regular and normal till æt. 19 years, when she began to suffer from painful menstruation. When æt. twenty-three years she had cervix dilated by Dr. Sinclair, of Manchester, for dysmenorrhœa, and wore a stem pessary for a time. Following this operation she suffered much less pain at periods.

Some years later, while nursing in Manchester hospital, she had an attack of pelvic inflammation which confined her to bed for three months. She enjoyed very good health for some time after this illness, though not free from pain at periods. Dysmenorrhœa got worse after coming to America seven years ago. The pain was of a crampy nature, and usually on first day of flow. In 1887 she had cervix dilated by Dr. Howitt, of Guelph. Some time after this she again consulted Dr. Howitt with some symptoms of pregnancy. She had not missed a period, but flow had been scanty. Soon after this she had a profuse flow with clots and pain, and thought she had a miscarriage, though neither fœtus nor placenta were seen. After this, periods were quite regular for a time again.

During spring of 1889, periods again became scanty, and about first week in July following she was taken rather suddenly with severe crampy pains without flow and without syncope. She again consulted Dr. Howitt at this time, who from examination suspected ruptured tubal pregnancy, and advised operation. She went into Guelph hospital, and on July 8th, 1889, Dr. Howitt operated, and removed what in a letter to me, he says, "he had every reason to consider a ruptured tubal pregnancy of right side." He also states in this letter that "at time of operation the left ovary and tube appeared to be perfectly healthy, and were not removed." A drainage tube was used at this operation. She made a very satisfactory recovery, with exception of an abscess in abdominal wall three weeks after operation.

Since operation menstrual periods have been regular every four weeks, but painful. Soon after abdominal wound healed, she noticed a small lump at lower extremity of cicatrix when standing, rather painful, and larger on coughing or sneezing. This lump has been gradually getting larger. She also complained of great irritability of bladder at times.

Examination of abdomen.—I found cicatrix of old abdominal wound considerably widened out, and at lower end a protrusion two inches across by one inch deep, and one inch from above down. It had a soft doughy feel like omentum, and was readily reducible into abdominal cavity through an opening one half inch wide by one inch in length.

Per Vaginam.—Uterus was found to be forward and to right, partially fixed, not enlarged, and os not much open. Right fornix was free, but on left side low down behind was a lump about as large as a small sized orange, tender on pressure, not movable. It was somewhat elongated and not fluctuating. This lump I took to be distended left tube and ovary.

She had menstruated with less pain than usual, two weeks previous to this examination. Following this examination she menstruated again about April 10th for four days; flow not profuse and not much pain. She menstruated again May 8th for three or four days, and had very little pain.

Operation Saturday, May 13th, 1893, in City hospital. Chloroform by Dr. Balfour, and assisted by Dr. Weld, I made incision in line of old cicatrix down through cicatricial tissue. Omentum was found adherent along the whole line of cicatrix. At lower end recti muscles were found separated two and a half inches, coming gradually together at upper end.

After separating adherent omentum, I explored pelvis, and found stump on right side clean and smooth, on left side a mass nearly as large as my fist, low down, adherent to floor of pelvis, omentum and intestines. The adhesions were separated

with some difficulty. In lifting up the mass, I broke into an encysted collection of dark fluid blood and clots behind broad ligament. The distended tube coiled around an enlarged, degenerated, cystic ovary was then lifted up and ligated close to uterus and cut away. After tying several bleeding points in omentum the pelvic cavity was carefully sponged out, and abdominal wound closed by through and through silk worm gut sutures, after splitting recti and turning out flaps so as to bring together from each side a broad, raw, muscular surface. The abdomen was closed without flushing or drainage. Recovery was uninterrupted. The abdominal sutures were left in over two weeks, and there was no sign of irritation about any of them when removed. There has been no recurrence of the ventral hernia since. The tube was found on examination to be distended with dark fluid blood; its fimbriated end closed, but uterine orifice open.

Remarks.—Although neither fœtus nor placenta were found at my operation, and though Dr. Howitt did not state in his letter to me that either fœtus or placenta had been found at his operation, yet I am inclined to think that the condition of things found at each operation was the result of ruptured tubal pregnancy. The encysted collection of blood behind broad ligament in my operation is, I think, strongly in favor of this view.

It is interesting to notice, that when Dr. Howitt operated for removal of right tube, the left ovary and tube were apparently healthy; and this brings up the question which has frequently been under discussion before, as to whether, in an operation for removal of ruptured tubal pregnancy of one side, it is right to leave behind in the pelvis the opposite apparently healthy appendage. I think it is generally acknowledged that tubal pregnancy is likely to recur in the opposite tube if left. In one case, reported by Tait, with which most of you are familiar, a normal pregnancy in uterus intervened between operation for ruptured tubal pregnancy on one side and interstitial pregnancy on the other. With this experience before him I have seen Tait leave the opposite tube in a case in which I assisted in the operation for ruptured tubal pregnancy.

In the case I have reported, the patient was very anxious for children and did not wish, if it could be avoided, to be deprived of the possibility of becoming pregnant, so that under these circumstances, I think Dr. Howitt was justified in leaving the opposite tube and ovary.

In connection with this case, I have just one word to say on the subject of flushing and drainage. A few years ago I would have considered it unsafe to close the abdomen in such a case without drainage, but it is just such cases that teach us that the closed peritoneum can dispose of a little blood, etc., that may be left, much better than if we should flush and drain. Drainage in this case would probably have interfered with the result desired, viz., cure of the ventral hernia.

Case III.—Suppurative appendicitis and peritonitis acute. Incision and drainage, followed twenty-three days later by discharge of gangrenous appendix through abdominal wound.

On Saturday, January 13th, 1894, I was called by Dr. Cline, of Belmont, to operate on a case of suppurative appendicitis. Patient, young lady æt. nineteen years, living on a farm near Belmont, was taken ill on Tuesday previous with abdominal pain and vomiting. Dr. Cline saw her on Wednesday and gave her a laxative dose of castor oil and opiates to ease pain. Bowels moved well from oil, and next day, Thursday, she felt very much better and got out of bed. Friday she was worse again with more pain, and rising pulse and temperature. Saturday, a.m., temperature 102° F., pulse 120.

With Dr. J. B. Campbell, of London, I arrived at house about 3.30 p.m., and found temperature 102° F., pulse 160; sick stomach. She was partly under the influence of opiates so that she was not at the time suffering much pain. Abdomen was distended and tympanitic. An indistinct thickening could be felt in region of appendix. From condition of patient immediate operative interference was called for. Chloroform administered by Dr. J. B. Campbell, and assisted by Dr. Cline, I again examined under anæsthesia before operating. Through abdominal wall thickening could be felt somewhat more distinctly.

Per Vaginam.—A mass could be felt to right of retroverted uterus in location of right Fallopian tube. I made an incision through abdominal wall just inside of spine of ilium about three inches long, down through muscles and fascia to peritoneum.

Before going further, I again examined with

finger of one hand in vagina and finger of other hand in wound, and from location of mass I was in some doubt as to whether it might not be distended right Fallopian tube. There was no bulging of peritoneum into wound, and percussion at this point was tympanitic. I then separated peritoneum from abdominal wall, down and back behind cæcum, to ascertain if there was any tense point where it would be safer to open. I could not find any tense point, however, though I separated as far in as brim of true pelvis. I then opened through peritoneum at point just inside of spine of ilium, when out gushed about half a pint of sero-purulent fluid, having a strong fecal odor. I then explored carefully with finger, but could not feel that peritoneal cavity was shut off in any direction. I did not deem it advisable to hunt too much for appendix, and thought the patient's chances would be better from free drainage than from prolonged operation and spreading of septic fluid, which hunting for, and removal of, appendix would necessitate. I, therefore, sponged out cavity and introduced rubber drain tube and gauze down behind cæcum, and sutured external wound above and below drain tube.

After operation, patient rallied very well, but was restless and vomited considerable coffee-ground material during night.

Next morning, January 14th, temperature 101° F., pulse 140; 15th, temperature 100½° F., pulse 126; 16th, temperature 100° F., pulse 100, free discharge from wound, fecal odor. From 16th till 24th, temperature ranged from 99½° to 101°, pulse from 100 to 108; wound discharging a moderate amount of thick pus; stomach weak, and patient nourished mostly by nutrient enemas. Very restless and slightly delirious at times, but does not complain of pain. Evening of 24th, a profuse discharge, having a strong fecal odor, and containing a quantity of fat globules and bubbles of gas, came up into wound from outside of peritoneum at upper angle of wound. A probe could be passed through this opening into a large abscess cavity extending down behind cæcum and up towards right kidney. The abscess cavity was washed out twice daily with iodine water; with little effect, however, on discharge, pulse or temperature; the temperature ranging from 101° F. to 103° F., and pulse 104 to 112.

January 29th, I made a counter opening in loin under attempted anæsthesia with ethyl chloride, and introduced a rubber drainage tube from front opening through back and washed out through this. From this time on till February 5th, condition continued about the same, though cavity was washed out freely twice daily.

On February 5th, just twenty-three days after operation, Dr. Cline found a slough presenting at front extra-peritoneal opening. With forceps he made traction and removed a gangrenous mass between two and three inches long and about the thickness of my thumb, having a very offensive odor. This mass was not examined very carefully, but it, no doubt, was the gangrenous appendix which had sloughed off and worked up into opening with flushing of abscess cavity. From the time slough was removed, all symptoms improved and abscess cavity gradually diminished in size.

Remarks.—(1) This case was a good example, showing the difficulty that may arise in some cases of appendicitis in the female, of distinguishing the swelling felt *per vaginam* from distended right Fallopian tube.

(2) Considering the tedious and stormy convalescence in this case, I think, perhaps, it would have been better to have opened into peritoneal cavity higher up near median line, and have gone right down after appendix and removed it at first. In doing this, I would have run risk of general peritoneal infection, but such risk could hardly be greater than risk from leaving gangrenous appendix to find its way up into wound. The higher incision would certainly be the proper one if one could be sure the appendix was gangrenous. In emergency cases of this kind, however, under the influence of opium, I do not see how it is possible to tell that the organ is in a state of gangrene. There are other circumstances that influence the surgeon in what he does in these cases. In this case, I had to operate without much preparation, in a country farm-house, by lamplight, with very little assistance, a neighbor lady holding the lamp. The patient's pulse was rapid and weak. Under such circumstances, with an abdominal incision higher up and removal of appendix, the result would, no doubt, have been rapidly fatal or rapid recovery.

(3) I think convalescence might have been considerably hastened if, on January 24th, eleven days after operation, when extra-peritoneal

abscess broke into wound, the patient had been anæsthetized and a free opening made in loin and cavity explored. The sloughing appendix could then probably have been removed and cavity cleaned and drained. This is what I would have preferred doing, but one cannot always do what one prefers.

CASE 4.—Tumor of pylorus and duodenum causing stricture; Gasto enterostomy with Murphy button; Recovery.

Patient, male, æt. fifty-eight years, laborer, had syphilis forty years ago.

Health good till June, 1893 when he entered city hospital suffering from abdominal pain, vomiting, loss of flesh. Diagnosis at that time was probable malignant disease of pylorus. Under treatment, washing out stomach and diet, he improved and went out of hospital some time during summer. Readmitted October, 1893. Condition on readmission—emaciated cachechtic appearance, vomiting after food, pain in abdomen around navel and epigastrium.

Examination of abdomen; flatulent distension; tumor with rather hard feel apparently involving pyloric end of stomach; stomach dilated; liver slightly enlarged. Examination of contents of stomach: could find no free hydrochloric acid, but lactic acid found one hour after food. Lymphatic glands in groin, axilla and neck also epitrochlear, enlarged.

Diagnosis.—Malignant disease of pylorus producing stricture. Liquid nourishment would pass through pretty well, but solid food would remain in stomach and could be washed out several days after taking. The possibility of tumor being specific was considered. Under treatment by washing out stomach, diet, etc., there was no improvement. Antisyphilitic treatment appeared to benefit some.

In April, 1894, consultants decided in favor of exploratory incision with permission to do gastro-enterostomy if thought advisable. I was asked by attending staff physician, Dr. Logie, to take charge of case and operate, Directions were given to keep patient on peptonized milk by stomach and nutrient enemas for several days before operation. Stomach to be thoroughly washed out morning before operation.

Operation Monday, April 23rd, 3.30 p,m. Notwithstanding preparation the abdomen was distended and flatulent. Intestines had not been well cleaned out. Anæsthetic by Dr. Balfour, and, assisted by Drs. Eccles, Logie and McGregor, I made median incision from ensiform cartilage down to left of umbilicus. There was some fluid in peritoneal cavity, but no peritonitis. The somewhat enlarged left lobe of liver, distended transverse colon omentum and coils of small intestine presented in wound. By pushing intestines down, somewhat dilated stomach presented. A tumor nearly as large as my closed fist was found involving pyloric end of stomach and duodenum. This tumor was irregular in outline, but smooth and not nodular.

Anastomosis of stomach with small intestine was decided on. A coil of small intestine from near left kidney as high up in jejenum as possible was selected and brought up in wound. Stomach was also drawn up in wound. The omentum was torn through and posterior surface of stomach wall, which was thicker than normal, brought up into wound. Points for approximation were selected, and, with fine triangular needle and a rather fine silk thread, I introduced running suture in stomach and another through coats of intestine after the method described by Murphy. An opening was made in intestine between running suture. Contents having been pressed out and held back by assistant Dr. Eccles, the smaller half of button was inserted in opening and held by assistant while pouch string was tightened around cylinder and tied. There was some delay in doing this caused by tendency of mucous coat to roll out, and also by bleeding from small artery, though opening had been made in gut at a point opposite the attachment of mesentery. Opening was then made through wall of stomach, and larger half of button inserted and held by assistant Dr. Logie, while running thread was drawn up around cylinder and tied. The halves of button were then pressed together. A couple of Lembert sutures completed the approximation.

During the introduction and fixing of button, the field of operation was shut off from abdominal contents and coils of small intestine outside abdomen by warm, moist towels and gauze pads. The approximated stomach and jejunum with omentum and intestine outside were carefully cleansed, and returned into abdomen with considerable difficulty on account of distension and

straining of patient. Abdominal wound was sutured with interrupted silk worm gut sutures and dressings applied.

Patient put to bed in very good condition with instructions to be fed by stimulant nutrient enemas and warm water enemas for thirst. There was almost incessant regurgitation from stomach for several days afer operation. Peptonized milk rnd liquid peptonoids were allowed by stomach about end of second day. Liquid regurgitated conisted of bile, mucous, blood, and partially digested fluid swallowed.

On third day he brought up a piece of orange pulp and when asked about it he said he had eaten part of an orange on Wednesday of the week preceding the operation. It had evidently remained in stomach and had not been washed out in the preparatory washing.

Bowels were moved with enema on fourth day without relief of regurgitation. Opiates were given with little relief. He continued to regurgitate and hiccough, bringing up two thirds of what he swallowed. Temperature kept normal and pulse good, from 70 to 80. On fifth day I tried hydrarg, per chlorid gr. $\frac{1}{10}$ by mouth every hour, when regurgitation quite rapidly lessened and completely ceased inside of thirty-six hours, and did not return after. From fifth till tenth day he had some elevation of temperature at times from stitch hole abscess. All abdominal sutures were removed on 8th day, and the stitch hole abscess quickly healed after this.

During slight elevation of temperature on fifth day, he got out of bed on his feet when nurse was not watching. Again on the ninth day when nurse was not watching, he got out of bed and dressed himself and walked from his room through long ward to closet and had motion of bowels there and was on his way back when discovered. He was lighted-headed from temperature at these times. This little exercise apparently did not affect him in the least. All the stools with exception of one passed in closet on ninth day, have been carefully examined with no sign of button as yet.

He has been up and about since third week, and is taking both solid and liquid food with very little discomfort. His appetite is good; bowels move regularly. He sleeps well and says that he suffers much less pain than before the operation. He has been taking hydrarg per chlorid ever since it was commenced on fifth day after operation, but less frequently now.

Examination of abdomen.—It is difficult to feel tumor.

Remarks.—There are several interesting things in this case:

(1) The rapid lessening and cessation of regurgitation after commencing bichloride.

(2) The apparent disappearance of tumor, and reduction of enlargement of lymphatic glands.

(3) Has the button passed or is it still in place? I would like to know, but probably never will during patient's life.

TREATMENT OF ENDOMETRITIS.*

BY HERMAN E. HAYD, M.D., M.R.C.S.E., BUFFALO, N.Y.

Mr. President and Gentlemen,—The pathology of pelvic inflammation teaches us that the endometrium plays the most important *rôle* in connection with the diseases of the uterus and its adnexæ. The lymphatics and cellular tissue, which so intimately surround the uterus, are, no doubt, frequently the channels of transmission of puerperal infection to the peritoneal cavity; but the vast majority of infective poisons find their starting point in the lining membrane of the uterus, and by continuity of tissue, extend to the tubes, ovaries, peritoneum and abdominal viscera. We are, therefore, confronted with the important practical question, how shall this inflammation be best treated? and what means shall be adopted to confine it to the uterus, or at all events, lessen its disastrous effects upon the adjacent and contiguous structures?

All intra-uterine manipulations are associated, necessarily, with some degree of danger, and a simple and benign endometritis, or better, metro-endometritis, or even metro-endo-salpingitis, may, by reason of such treatment, assume active and dangerous intensity. Moreover, it must always be borne in mind, these conditions are often due to, and dependent upon, some general systemic condition, as gout, scrofula, syphilis, simple but prolonged anæmia, bad hygeine, social and sexual excesses, etc., and require no local treatment

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whatever, and are often relieved and even cured, by proper constitutional measures. But, unfortunately, metro-endometritis is often a very chronic and intractable disease, and if not cured, is capable of extending its mischievous effects upon so many important structures, that, in addition to constitutional agents, local and topical applications become absolutely necessary.

We may classify endometritis into acute, subacute, and chronic; and, according to its location, into cervical and corporeal. True, this is but an arbitary and convential classification; yet it embraces all the clinical features, as well as the pathological conditions assumed by the disease, whether of puerperal, post-puerperal, gonorrheal or traumatic origin; or whether a simple catarrh, granular, fungus, or ulcerating process.

Acute endometritis or pelvic inflammation is treated as one would treat other inflammatory conditions: rest in bed, opium or codeia for the pain, hot fomentations to the lower abdomen, and hot vaginal douches, if soothing, grateful and well borne, a nourishing but simple diet, and daily soluble movements of the bowels, if possible. A brisk cathartic at the onset of the attack is often capable of aborting what might have been a very pronounced peritonitis. If an acute specific cause can be demonstrated, as for instance, gonorrhœa, decomposing detritis after abortion or labor or trauma, the result of criminal attempts at abortion—under the strictest antiseptic precautions the uterus should be thoroughly dilated, washed out with a weak corrosive sublimate solution 1.5000, and curetted with a sharp spoon; and then again irrigate the vagina and uterus thoroughly and leave in the uterine cavity a suppository of iodoform. This I have repeatedly done, and invariably have lessened the pain and distress, reduced the temperature and pulse, and, I am satisfied, shortened and sometimes aborted the course of the disease.

There is no place in surgery where this great surgical principal of drainage is more indicated than in these cases, because they manifest the greatest tendency to chronicity, and are associated with such dangerous complications and irreparable mischief to the tubes and surrounding tissues. By its timely employment, life can often be saved, and the usefulness of important structures maintained. I am inclined to believe that intra-uterine injections are unnecessary if this proceedure has been carefully carried out; and, consequently, the dangers and pain due to the frequent handling of the parts are minimized.

The treatment of subacute and chronic metro-endometritis is more elective; consequently, there are many different methods of procedure, and each one accomplishes more or less good, according to its applicability. If there be a pronounced laceration of the cervix, with ectropion of the lips, and a persistent and recurring ulceration, a properly performed Emmet, preceded by curettement, will give the greatest satisfaction; and in fact, if the chronic inflammation and hypertrophy be due to sub-involution, consequent upon the laceration, nothing short of this operation will cure the case. Applications to the endometrium of Churchill's tinct. iodine, or two parts iodine to one of carbolic acid, or a strong solution of nitrate of silver. Painting the vault of the vagina and cervix with iodine, and well applied tampons saturated with glycerine or boro-glyceride 30%, or ichthyol 15%, with glycerine are also indicated. It is also in this class of cases where galvanism intra-uterine is so signally beneficial, and why there can be any doubt as to its efficiency, is a growing surprise to me. Malpositions and displacements must also be corrected, if possible, by proper filling passages.

In making applications to the endometrium, one important point must always be borne in mind. Be as aseptic as possible, and be certain that the internal os is patulous, so that the fluids and discharges can find egress; as drainage must be provided for, otherwise colic, pain and a slight or even a very severe peritonitis can result from these trivial and apparently harmless applications.

Endometritis is not usually an uncomplicated affection, but the inflammatory process has extended to the tubes and ovaries and peritoneum. Fixation of these important structures has taken place, and their secretions are retained. Now comes the important question, Is the endometritis, which was responsible for the salpingitis and ovaritis and peritonitis, the point of surgical attack, or has it ceased to be an important factor when the tube and ovarian mischief can, with reasonable certainty, be felt and diagnosticated?

Naturally, the more the source of irritation be endometrial, the more we can expect from local

and conservative treatment, while, on the contrary, if tubal and ovarian disease exist to any great degree, ablation of the offending organs, is, perhaps, the only hope of relief. As a result of these premises, two great schools of pelvic surgery have their existence, the one believing that endometritis seldom requires any special treatment other than good hygiene, absence of sexual relation, good food, and good environment, tonics and daily soluble movements of the bowels. In other words, ill-health and much suffering indicate not simply a condition curable by simple means, but serious tube and ovary mischief, curable by no means short of an abdominal section.

On the other hand, and I believe there is a growing feeling in the profession that conservative treatment is much more often called for, and that the endometrium is the seat of progressive mischief. About ten years ago, Dr. Gill Wylie brought to our notice his stem drain, which he introduced into the uterus after curettement, and, three years ago, Dr. William Polk emphasized that treatment by giving us his simple but very efficacious operation, and with it a report of a large and extremely interesting class of cases, in which there was considerable tubal and ovarian mischief, kept up and dependent upon endometritis.

So favorably has this method of treatment been received, that many operators have extended its range of usefulness, and first curette, and pack the uterus before doing a section, so as to get a perfectly clean field, and either complete the section upon the same day or a few days later. It is claimed, and I believe justly, that the great advantage of packing the uterus after curettage is that it stimulates quicker and more perfect involution; that it promotes more perfect and permaneat drainage by insuring patency of the cervical canal; that it assists in the restoration of a misplaced organ by supplying a soft support as well as drain; and that the mucous walls of the uterus, being separated by the gauze, a healthy epithelium is soon produced.

I have seen the most inveterate cases of uterine leucorrhœa, metrorrhagia and painful menstruation cured by this simple proceedure when a long course of uterine applications, fraught with infinitely more danger, had failed to bring about any permanent improvement. Cases, moreover, complicated with considerable tubal and ovarian mischief and sterility, as well as general ill-health, have been speedily benefited; and maternal functions and responsibilities have been assumed, and future good health and happiness accomplished.

I prefer to do this operation in those ambulatory cases where there exists some tubal thickening, and where intra-uterine manipulations cause much pain and distress, believing that it is less dangerous to thoroughly clean the uterus, and provide suitable drainage at one sitting, than to subject the patient to the possible dangers of increasing tubal and ovarian trouble by too frequent intra-uterine medication.

Of course, I do not wish to be understood, that this operation is to take the place of the brilliant surgical procedure, salpingotomy and salpingoöphorectomy; because nothing short of a laparatomy can cure a big pus tube with its accompanying ovarian abcess: but I do believe that tubal and ovarian inflammations, dependent as they often are upon endometritis and short of pus collections, are often cured by dilatation, curettement, and uterine drainage; and without adding a large element of danger either to the existing inflammations, or to the possibilities of remoter mischief.

THE IMPORTANCE OF EARLY ATTENTION TO THE DISABILITY CAUSED BY INFANTILE PARALYSIS.*

BY A. B. JUDSON, M. D., NEW YORK.

I propose to consider briefly the question whether a certain class of patients should not be committed more entirely and more early than they are to the care of the orthopedic surgeod, a consideration as interesting to the family physician as to the orthopedist, as they meet in a friendly alliance to secure the greatest benefit for their common patient.

I refer to patients disabled by infantile paralysis. The child has passed through the stage of onset, Ergot, electricity and massage have produced their legitimate effect, and we will say that the eighteen months, which are believed to be the limit of spontaneous recovery from the paralysis, are passed. The friends and the patient, with

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many grievous misgivings, have become reconciled, or at least accustomed, to disability and deformity which now seem to change for neither the better nor the worse. What can now be done? The question whether such a patient may not yet receive benefit from the advance of scientific knowledge, or from the daily increasing facilities for the application of knowledge, will surely spring up in the parental heart.

Now it is curious to note that the deformity in these cases is often found, upon analysis, to be a disability more than a deformity. Take a case, for example, in which the knee cannot be completely extended. When the patient is sitting there is no deformity, but when he stands, the apparent deformity is due to a disability—an inability to extend the knee. How easy it would have been to prevent contraction of the hamstrings by providing for their repeated elongation by complete extension of the knee, easy comparatively for one who has given himself to such details, and is habitually mindful of their importance, and free from the manifold cares which beset the average practitioner. And it should be borne in mind that cases sometimes occur in which shortening of the tendons begins, in a manner not well understood, at a very early stage, before simple desuetude can be fairly accused of being the author of the mischief. The prevention of muscular and tendinous shortening then should receive attention on the part of the early observer of the case. It is not an obscure and difficult point, but one which has perhaps escaped the consideration to which it is entitled.

To recur to the disabled knee, and this part of the anatomy is used simply as a convenient example to illustrate points in pathology, and treatment applicable to all the joints, if the knee is kept extended at those times when walking is attempted, not only are the muscles and tendons kept in normal elongation, but the general welfare of the limb is assured. Neglected patients may be seen in the streets walking laboriously with extension of the knee, produced by the hand pressed firmly at every step on the lower part of the thigh when the weight of the body is on that limb. It is doubtful whether this in any case prevents the final resort to a crutch, by the use of which the limb is made to dangle, being carried about as a worse than useless burden, twining limp around the crutch, subject to the painful affections which attack the lower extremities in cold weather in the absence of healthy circulation, and more and more impeding locomotion until, as has happened many times, the adult patient seeks relief and improved locomotor ability in amputation and an artificial limb. If the knee is stiffened mechanically, the pressure of the weight of the body in standing, and the repeated concussion of the limb, as the foot strikes the ground in walking and running, will improve the tardy circulation, but beyond this, and better than this, will be the development of unused muscular fibres and special groups of muscles, by whose action important motions will be acquired which would have been impossible if the limb had remained in suspension.

Now in order to keep the knee firmly extended under the weight of the body in standing and walking, and to give use and development, as far as may be, to the fragmentary muscular system of the limb, apparatus is required; but it will not be obtained without authoritative medical advice and prescription, and as a rule the family physician cannot be expected to work out the tedious processes incident to treatment of this kind. It falls to the lot of the specialist, who can well bear the inconvenience attending final results which are more or less imperfect, after satisfying himself that he has done all that science permits to be done, and whose daily and hourly mastery of the necessary details has enabled him to reduce perplexing and complicating conditions to familiar routine. Treatment of this kind lies far outside ordinary practice in which the physician renders such signal service. He makes his diagnosis, advises, prescribes, remains on guard against complications, foresees the crisis and prepares for it, leads the way cheerfully through convalescence; and medical science, so dear to us all, finds but another illustration of its power and beneficence. In one home a wasting fever has been finally resolved and the patient rises in perfect, or even improved, health from a bed where the grim alternative has been decided in his favor. In another the children have been happily carried through the perils of infection and resume their places at the table. But in the special practice adapted to the cases under consideration there is no fear of a fatal result and no rejoicing, and the object

sought is at the best a palliation. But who will say that important service has not been rendered? For it should be remembered that the conservative and plodding practitioner along this line has for an ally one of the most potent influences in Nature in the growth of the body. The popular reliance on this force, expressed in the common question, "Will the child not outgrow the ailment?" whatever it may be, is not always misplaced. Happy the physician who, imparting his confidence to the patient's friends, and relying on the exact science of the physicist, sees grace and power growing out of deformity and helplessness.

A good general rule in the treatment of deformity in a growing child is to keep the part as near as possible in the desired shape as much of the time, day and night, as is practicable, so that the increment shall be on the right side of the dividing line between the normal and abnormal. The familiar proverb says: "As the twig is bent, the tree's inclined." In the troubles following infantile paralysis the principle should be extended. We should not only persist in keeping the part as near the normal shape as we can, but we should also give as wide play, as the crippled condition of the limb will allow, to the functions of motion and weight-bearing. From the very earliest attempt to walk, or to make use of the muscles and joints which are imperilled by the cord lesion, extraneous assistance should be afforded. It should not be said, off-hand, that the child is too young. The first and repeated question should be: Is the child not yet old enough, or is he not already giving sufficient evidence of a desire to make use of the questionable muscles and joints to make assistance desirable or necessary?

When efficient treatment is begun it is easily continued. Improved ability is at once appreciated by both parent and child. It is well that such is the fact, for improvement does not stop with infancy or childhood. The process is slow and prosaic, but the benefit cannot be over-estimated in the opinion of the one who is in the best position to judge of its value. A slight improvement in the gait or an ability to walk a little faster, or a little further without fatigue, confers lasting happiness, and the patient and physician are thus encouraged to go on to new achievements until, with one step after another gained, the outcome is an adult well able to follow the ordinary pursuits of life, in place of a being who had looked forward to hopeless dependence.

Selected Articles.

CLINICAL STUDY OF THE SO-CALLED REFLEX NEUROSES.

Observations gathered mainly during the last fifteen to twenty years, by numerous authors, have shown that there are many nervous ailments which owe their origin to a minor local disease or anomaly in some part of the body. Yet this subject of reflex neuroses has neither received adequate recognition in general text-books, nor has it been fully appreciated by the profession at large. The interest of such a subject to the general practitioner depends upon the frequency of these ailments. In this respect views differ widely.

Ophthalmic and rhinologic observers have, perhaps more than any other, contributed to this subject, and their reports abound in instances of this kind. Indeed some specialists no doubt exaggerate by including under the head of reflex neuroses, conditions, the reflex origin of which is not yet established nor even probable. Many text-books on nervous diseases, on the other hand, slight the subject, or like the treatise of L. C. Gray, state that reflex neuroses are rare occurrences. Yet even widely different views as to the frequency of reflex neuroses are not wholly irreconcilable, if we but use the term with strict definition of its meaning. According to gradual usage the name, "reflex neuroses," is at present applied to any *abnormal* nervous process started by the irritation of some peripheral sensory area. This definition by itself enables us to distinguish between mere symptoms which are the *normal* and invariable consequences of disease of a given sensory part, and the reflex neuroses proper which are brought on by such irritation only under certain circumstances. In fact, characteristic of reflex neuroses is their apparent capriciousness. The same peripheral lesion which leads to a reflex neurosis in some patients may exist in others without producing such disturbances.

It is evident that if we accept this definition, very many headaches, neuralgias and motor disturbances come under the head of reflex neuroses, and that this nosological group hence includes many of the ailments daily met with. On the other hand, it may be admitted that epilepsy, chorea and other types of nervous disease of graver significance are probably but rarely of reflex origin.

The term "reflex" is used by the clinicist in this connection in a wider than its true physiologic significance. As the physiologist speaks of the act of winking as a reflex produced by conjunctival irritation, so the clinicist may call

a blepharospasm a reflex neurosis, if it is maintained by conjunctional disease. But to speak of a neuralgia due to a diseased tooth as a "reflex" occurrence, is not warranted by physiologic nomenclature. We must either intentionally enlarge the significance of the term "reflex," or we may call these nervous disturbances, *neuroses* of *peripheral origin*, and subdivide them into motor, secretory, vaso-motor, sensory, (and possibly inhibitory) neuroses of peripheral origin. Even the motor "reflex" neuroses are not always reflex in the sense of the physiologist. Some of them, it is true, are but types of normal reflex action morbidly exaggerated. As such might be mentioned sneezing fits from nasal disturbances and blepharospasm from ocular irritation. In other instances, however, such as asthma and reflex epileptiform convulsions, the nervous disturbance has no physiologic prototype. Unlike the normal reflexes, these motor phenomena are not the immediate consequence of the irritation to which they owe their origin. The peripheral excitation does not lead at once to a reflex action, but its continuance influences the nervous centres so that *periodic* discharges occur in the nerve channels which are normally not open to impulses of such origin. *Periodicity* is also a feature of some sensory neuroses, like migraine and the so-called visceral neuralgias. Other sensory neuroses, however, such as many forms of headache and neuralgia, are either constantly present, or recur with every increase of peripheral irritation.

In order to have a definite basis for further discussion of the subject, I will now tabulate the neuroses of peripheral origin, the existence of which has been satisfactorily established by the observations of more than one author. Without attempting any full review of the literature, I will only quote as authorities some of the writers who reported either the first or the most conclusive instances of such neuroses, or who have summarized the literature. I may add that I have personally seen illustrations of nearly all the quoted neuroses of ocular and nasal origin.

STARTING POINT.	NEUROSIS.
Anomalies of refraction and accommodation of the eye and some instances of anomalies of the external muscles.	Headaches, continuous or periodic. Vertigo. Nausea. Ciliary spasm. Blepharospasm and chorea of facial muscles. Epilepsy (rare).
Diplopia from insufficiency of one of the external muscles of the eye.	Deviation of the head, simulating wry-neck.
Nasal disease and suppuration of maxillary sinus.	Lachrymation. Discomfort in eyes and lids. Scotoma fugax (blind headache). Vaso-motor disturbances of lids and face. Headaches. Neuralgia of branches of trigeminus. Vertigo. Facial spasm. Cough. Spasm of glottis. Asthma. Nightmare. Epileptiform convulsions. Functional cardiac disturbances. The symptoms of exophthalmic goitre.
Ears.	Vertigo. Nystagmus. Cough (rare).
Pharynx and faucial region.	Cough. Epilepsy. Spasm of glottis. Morning vomiting.
Teeth.	Neuralgia of trigeminus. Otalgia. Headaches. Facial spasm. Epileptiform convulsions.
Stomach and intestinal tract.	Headache. Vertigo. Trigeminus neuralgia Visceral neuralgias. Cardiac and circulatory disturbances. Epileptiform convulsions.
Painful peripheral cicatrices.	Epilepsy.

This list would be incomplete without reference to neuroses originating from disease of the pelvic organs and the male genitals (especially adherence of the prepuce). But since I have no personal experience in this line, and since authors on these subjects are neither as precise in their statements nor as harmonious among themselves as in the instances tabulated, I will base my comments principally on the other topics.

The co-existence of a peripheral anomaly and of a functional nervous ailment is not sufficient by itself to base upon it the conclusion that the latter is dependent upon the former. The reflex origin of a given neurosis can, however, be proven by various methods. In many instances it is suggested by the patient's history if carefully examined. Whenever the nervous disturbance follows regularly any intensification of pre-existing local ailments, a relationship between the two phenomena is highly probable in the light of our present information. If the patient states that his headache is brought on by the use of his eyes, or in another case that his attack of asthma is always preceded by sneezing and stuffiness of the nose, there can be little doubt as to the relation of cause and effect. In other instances, however, the cause is persistently present, while the nervous disturbances are of periodic occurrence, for instance, in migraine dependent on astigmatism, and in the few rare cases of epilepsy which have been traced to nasal irritation. Under these circumstances, the examination of the patient can only lead to a tentative diagnosis of the origin of the nervous trouble. The experimental production or exaggeration of reflex neuroses in patients subject to them is possible only in some instances. Thus sneezing fits, spells of nasal cough, more rarely headaches, and occasionally asthma and attacks of syncope may be induced by irritating with a probe the sensitive nasal area of patients suffering from such nasal neuroses, but this experiment is not always successful. Occasionally, too, periodic attacks of the existing neuroses follow intra-nasal cauterization. In various instances of epilepsy due to sensitive cicatrices, the reporters were able to bring on the attacks by pressure upon the scars.

As a rule, however, the reflex origin of a neurosis can only be proven by its cessation after eliminating the cause, a test which constitutes the principle of treatment. If the refraction of the eye is suspected as the cause, absolute rest of the eyes, if necessary, combined with the use of a cycloplegic drug, and finally appropriate glasses, decide the correctness of the diagnosis. If heterophoria, a strain of the ocular muscle during the maintenance of binocular vision, seems to account for the nervous disturbance, the exclusion of one eye by a shade will obviate the immediate consequences of this strain. The nasal neuroses are often checked at the beginning of an attack by the thorough application of cocaine to the sensitive area, although this test is not always positive. And finally, in those instances in which fæcal retention or irritation of the bowels by parasites can be suspected as the cause of the neurosis present, systematic intestinal evacuation is the test of the correctness of this view.

In other instances the therapeutic test cannot be as decisive concerning the origin of the neurosis as in those just quoted. Whenever the peripheral lesion is of such a nature that persistent treatment is required for its removal and that some time must elapse before its consequences can be expected to cease, good judgment is necessary to determine whether the neurosis is really of peripheral origin or simply a coincidence. If the interests of the patient demand general hygienic direction besides the elimination of the local disease, the decision is particularly difficult. This explains why our knowledge of intestinal and uterine "reflexes" is so much less positive than the doctrine of ocular and nasal neuroses. Under such conditions, it is only the accumulation of similar well observed cases upon which reliable conclusions can be based.

It might seem as if the most conclusive evidence could be obtained by the surgical removal of the cause of irritation, whenever this is feasible. Indeed, the most brilliant cures of nasal reflexes and of epilepsy due to painful cicatrices come under this head. But here also judgment and neurologic training are required to avoid sources of fallacy. It has been said that some of these cases, for instance asthma of nasal origin, were really cured by counter-irritation, and that the galvano-caustic destruction of the sensory area in the nose acted as a "derivative." This objection could be entertained only if it had been shown that "counter-irritation" anywhere else yielded equally positive results, which has never been done. The validity of the reflex theory has also been assailed on the ground that relapses have occurred after such operative cures. But whenever such relapses were examined by competent observers (Hack quotes such cases), it was found that they depended on relapses of the local disorders, which the surgical treatment had failed to eradicate thoroughly. Such coincidences are really but an additional proof of the correctness of the "reflex theory."

The real source of fallacy in conclusions based upon the results of operative treatment is, in my judgment, the difficulty of distinguishing between the influence of the operation itself and the influence of the mental impression made by the operation. It is well known to neurologists that emotional impressions and "expectation" may stop for a time, or even dissipate permanently, choreic movements, but more especially hysterical pains and spells, even when they had existed for a long time. It is equally a matter of experience that some cases of epilepsy are temporarily benefited by any new treatment of an impressive nature. For this reason, much familiarity with the clinical history of functional nervous disorders is requisite to enable the observer to decide whether the cure depended rather on mental "suggestion."

The less we know about the pathologic significance of the alleged peripheral cause, the less reliable will be any conclusions as to its relation to co-existing neuroses. Hence skepticism is in place when, for instance, Scheinmann seeks the cause of some nervous condition in sensitive areas wandering from place to place in the nose and reappearing after the operation in another spot. Judgment might also be held in reserve as to the relation of neuroses to low degrees of heterophoria. No doubt there are cases where the strain of eye muscles working under disadvantage leads to nervous disturbances. But to what extent the lower degrees of insufficiencies of ocular muscles—almost normal occurrences—are resented by the nervous system is still an open question. Any oculist who has learned by experience how little the muscular balance of the eye-ball is at times changed by extensive tenotomies in well-marked cases of ocular deviations of the latent type, cannot but doubt whether the mere nicking of muscles in low degrees of heterophoria, cures the patient by influencing the muscular tension or the patient's mind. Indeed the question is a proper one, whether many instances of heterophoria are not by themselves hysterical manifestations, and such a view would be supported by the frequent experience of complete relapses of the ocular deviations after temporary cures by operations on the muscles.

More than mere skepticism, however, is called for, when attempts are made to cure neuroses by muscle-cutting—that is to say, by removing the alleged muscle-strain in the forced effort at binocular vision, in cases which present manifest strabismus and hence have no binocular vision.

When, however, persistent and well-defined nervous symptoms disappear promptly and permanently after the surgical removal of some demonstrable peripheral lesion, or return only if their starting cause relapses on account of insufficient treatment, there can be no logical doubt that the neurosis has been maintained by the peripheral anomaly in question.

In all discussions on "neuroses" it must be clearly kept in view that the manifestations of a disordered nervous system are but symptoms, and that these symptoms may depend on different remote causes in different instances. Similar symptoms may be of "reflex" origin from one organ or another in one case, but may be due to actual lesions in the nervous system in another patient. Hence there is no contra-indication in admitting that epilepsy and chorea are sometimes of peripheral origin, although in most instances they depend on disease of the nerve centres.

The peripheral irritation which can induce nervous disturbances in certain patients is not necessarily and indeed but rarely felt as pain. It may give rise to so little conscious sensation that inattentive patients overlook it, or at least do not connect it with the neurosis started by it. When, for instance, ametropia causes headaches or other neurotic symptoms, the patient may or may not complain of discomfort in the eyes. Personally, however, I have never seen a case in which close questioning did not elicit at least the admission that the eyes did give rise to some slight annoyance when used steadily. Similarly in the case of nasal and pharyngeal disorders. While in some instances the patients may not complain directly, still I was always able to learn by proper questioning that some local disturbance could be felt, though perhaps not enough to suggest it as the cause of the neurosis. But there are also many instances of physiologic reflexes started by an excitation of sensory nerves of which the individual does not become conscious. As illustrations might be mentioned the regulation of the act of accommodation by the blurring of retinal images, the co-ordination of the external muscles of the eye under the influence of diplopia, the self-regulation of the breathing movements by means of the distension of the pulmonary tissue, the changes in the cardiac rhythm and in the size of the arterioles according to local conditions of rest or activity, and many other instances.

A clear insight into the pathogenesis of reflex neuroses can only be obtained by an analysis of all the factors concerned in their production. For evidently the peripheral anomaly starting the neurosis is but one of the factors, or why should a patient with nasal polypi have asthma when so many others suffering from the same nasal condition escape the secondary affection? Why should but a small number of hypermetropic people get headaches, while the majority of eyes with this deficiency cause only disturbed vision and nothing else? If an irritation alike qualitatively and quantitatively produces disturbances in the nervous system of but one person out of many, there must be special reasons for this exceptional result. Unfortunately our knowledge of the conditions determining neuroses is as yet but very meagre.

The history of patients shows often that the nervous trouble began after some special increment in the intensity of the peripheral irritation. Thus very frequently headaches from eye-strain date back to the time of unusually severe use of the eyes. Again, in other instances, nasal neuroses begin when the chronic nasal condition is intensified by an acute coryza, or when the nose has been irritated by exposure to dust. But these observations, important as they are, do not solve the question why such peripheral irritation will only cause neuroses in some persons and not in others.

In a fair proportion of these sufferers we can recognize hereditary influences. In my inquiries into the family histories in cases of ocular and nasal neuroses, I have very often found similar affections in different members of the family. While it is in no sense an explanation to state that neuroses are more liable to occur in a person predisposed by heredity, still the fact as such is worth noting.

In the sensory neuroses, and especially those of ocular origin, I have learned to regard as important factors the pernicious results of indoor confinement in cities. My case-book contains numerous records of school children and young clerks whose headaches or dizziness or other sensory discomforts were for the time being checked by glasses of moderate strength, but who were equally comfortable without their glasses after a thorough vacation. It is especially during the growing period of life that want of out-door exercise and close confinement increase the liability to reflex disturbances. Chlorosis also has its share in the etiology of these affections, and where the history shows that the nervous disturbances although clearly of peripheral origin have only begun since anæmia was manifested, iron and hygienic directions are often as serviceable as the correction of the peripheral cause.

The history of some cases shows that the sensory neurosis dates back to the time of recovery from some acute fever—measles, more often in my experience than any other. I have also noticed relatively often that headaches of refractive origin began during the lactation of mothers. In two instances of nasal neuroses, observed by myself, excessive smoking seemed to be a predis-

posing condition, and moderation of this habit relieved the intensity and frequency of the attacks. One of the patients had short attacks of dyspnœa with palpitation of the heart, and was ultimately cured by operations restoring the patency of the nose. The other one had periods of cardiac irregularity and acceleration presumably due to papillomata in the nose, but the diagnosis was not made certain, by his refusal to the operation.

A factor to which but little attention has yet been called is the co-existence of several sources of irritation in the system. I. N. MacKenzie (*Am. Jour. Med. Sci.*, April, 1884), has observed that nasal neuroses are often most pronounced during menstruation, and that they can be exaggerated by sexual excesses. It is well known that migraine accompanies the menstruation of some women. In a few instances of migraine especially accentuated during such times, I have proven the ocular origin by successful correction with glasses. Several cases of asthma, the nasal origin of which was shown by the ultimate relief given by nasal surgery, have given me the history of attacks induced particularly during times of intestinal distress, and in these patients dietetic management had a distinct influence on the frequency of the asthmatic attacks. It is common experience, too, that pregnancy predisposes some women to serious nervous symptoms. In some instances of facial neuralgia, of scotoma fugax and of circulatory disturbances in pregnant women, the nasal origin was strongly suggested by the history of the nasal distress, although I have only twice demonstrated the relationship by the success of intra-nasal operations. It should be remembered in this connection, that nasal operations have several times been followed by miscarriages.

It must finally be admitted that in many instances of neuroses of peripheral origin no accessory influences, no disturbances of nutrition, in fact no deviation from perfect health of the nervous system, can be detected. Indeed this seems to be the case in many of the more typical instances in which the elimination of the starting-point stops at once all nervous symptoms. On the other hand, whenever the history shows fluctuations in the intensity of the nervous troubles and periods of intermission, it is more likely that the peripheral cause has been aided in its influence upon the nervous system by accessory baneful circumstances, without which it would not have sufficed to induce the neurosis. These considerations explain also why some neuroses cease spontaneously, in spite of the persistence of the peripheral cause, while others never stop until the starting-point is removed.

Finally it is proper to ask, What is the relation of reflex neurosis to hysteria? While hysterical persons are not exempt from these troubles, I have neither found in my experience nor in the reports in literature, any large proportion of cases of neuroses of well established peripheral origin in patients with manifest hysteria. I might almost say that where the history of hysteria is clear, the therapeutic test is apt to fail in establishing the peripheral origin of the symptoms. No doubt some of the hysterical complaints, for instance some forms of headache and the globus hystericus are really of peripheral origin. But it seems as if in their production it were not so much the inferior centres, as the cerebral hemispheres, in which the disturbances are induced. For hysterical manifestations when once established are apt so persist, even after the influence which started them has been eliminated. —H. Gradle, M.D., in *Jour. Am. Med. Assoc.*

REPORT ON IRRIGATION OF THE URETHRA AND BLADDER WITHOUT A CATHETER.

Some three years ago my attention was directed to a report of some experiments by H. Felike, of Buda-Pesth, published in the *Internationale Centralblatt für die Physiologie Harn- und Sexual Organe*, which demonstrated that, whereas, under ordinary circumstances, fluids cannot be forced beyond the compressor urethræ muscle, by means of the ordinary urethral syringe, the resistance of this muscle can be readily overcome when subjected to the pressure of a column of water of from one to three meters in height. His method was as follows:—

The patient, immediately after a complete emptying of the bladder, was placed in the horizontal position on a table or bed. The blunt nozzle of a fountain-syringe was introduced just within the external urethral orifice, and the meatus gently compressed against it by the thumb and forefinger. The reservoir was then raised to a height of two meters, and the patient instructed to take one or two deep inspirations, allowing the air to rapidly escape by complete muscular relaxation. In a few moments the subject of the experiment would experience a desire to urinate, when it would usually be found that the bladder had been completely filled without the slightest discomfort to the patient, and often without his knowledge.

The idea of irrigating the bladder in this manner, although new to me at that time, was by no means a recent discovery, for upon looking over the literature of the subject, it was found that Dr. C. B. Crossfield had published in the *New London Medical Journal*, in 1792, a report of some similar experiments, in which he succeeded in irrigating the bladder from the meatus by means of continuous pressure furnished by an or-

inary bulb-syringe; and in 1876, Dr. Hunter McGuire reported successful bladder-irrigation in the same manner. Being impressed with the advantages which this method of vesical irrigation offered over the ordinary procedure by means of a double-current or single-current catheter introduced into the bladder, I determined to give it a trial.

The first patient was a middle-aged man who had suffered for twenty-five years from symptoms of chronic prostatitis and posterior urethritis, with the frequent occurrence of an acute bladder-infection, during which he suffered intensely. For these attacks he had frequently been treated by bladder-irrigation, the catheter being introduced in the usual manner. This, while it seemed to have a favorable effect upon the cystitis, was always so painful as to cause acute suffering for a considerable period after the operation, and was often productive of so much irritation in the deep urethra as to render its continued use impracticable. It was during one of these acute attacks that he first came under my observation, and his urgent request for me to avoid, if possible, or at least postpone the introduction of any instrument into the bladder, led to a trial of the method described. The result was strikingly very satisfactory, for the man not only recovered far more rapidly than was usual from such attacks, but he was able to accomplish this result without the dreaded pain which always attended the introduction of a catheter. In this case, after the first two or three washings, the patient was able to irrigate his own bladder without the slightest difficulty, and, on several occasions since this attack, has been able to abort a return of the symptoms by an early resort to this simple procedure.

A number of other experiments were subsequently made with a view of testing the value of this method in patients suffering with various diseases of the urethra and bladder in which irrigation was indicated, and, although the results have not, in every instance, been as satisfactory as in the case cited, it may be said that the irrigations were accomplished with much less discomfort to the patient than is usual when the catheter is employed. The only disadvantages which were observed were in cases exhibiting an unusual amount of tonicity of the sphincter muscle, and in these the first few attempts were attended with considerable delay before the fluid would pass into the bladder. In only one case under my observation has it been impossible to accomplish this result.

It is, however, in the treatment of chronic urethritis that this method seems to be most useful. In certain obstinate cases of gleet, especially when there is an involvement of both the anterior and posterior portions of the urethra, the daily irrigation of the entire canal is often attended with the most satisfactory results. The method most generally employed to accomplish this is perhaps that of Prof. Ultzmann, which consists in the introduction into the deep urethra of a short silver catheter, in the beak of which are several longitudinal slits. This, when in position, is so situated that the longitudinal openings are posterior to the compressor urethræ muscle. Several ounces of a medicated solution are then injected by means of a large, hard-rubber syringe. The fluid, after thoroughly washing the posterior portion of the canal, passes into the bladder, and is later expelled by the voluntary efforts of the patient after the withdrawal of the catheter. This insures a double irrigation of the posterior, and a single washing of the anterior portion of the urethra.

As one of the many methods of treating this most annoying condition, I have often employed the method of Prof. Ultzmann, and frequently with happy results. The objection has been raised by several who have made use of this plan of treatment, that the metallic instrument often produces by its presence in the deep urethra well-marked irritation, giving rise to frequent and painful micturition, with vesical tenesmus. Not infrequently also when spasms of the cut-off muscle is present, the mucous membrane is lacerated by the sharp edges of the longitudinal openings, occasioning considerable hæmorrhage.

Although recognizing the marked advantage which urethral, and especially posterior urethral, irrigation offers over all other methods of treatment in certain cases of this kind, I had practically abandoned its use, owing to the objections stated. As irrigation without a catheter seemed to possess all the advantages of the Ultzmann procedure, and to avoid the chief objections attending its use, a trial of this plan was made in several cases, of which the following is an example:—

B. F., thirty-four years of age, was referred to me by the medical examiner of one of our large insurance companies, to find, and if possible remove the source of a small amount of pus which was habitually present in his urine. There had been a history of several attacks of gonorrhœa during the past twelve years, with a more or less continuous gleet. An examination revealed a penis of three and a-half inches in circumference; urethra free to 34 from bulb to meatus. The urine contained a faint trace of albumin. In the first specimen passed there were found *Tripperfäden* and a few pus-cells; in the second specimen a small amount of free pus. Endoscopic examination revealed the presence of congested areas and glandular involvement in the bulbous region, with marked hyperæmia of the deeper portion of the canal. The patient had been treated

by internal urethrotomy, sounds, and injections for many months, with some improvement. An irrigation was made by means of the Ultzmann catheter, with as much gentleness and care as possible. Considerable hæmorrhage resulted, and the pain and tenesmus which followed necessitated the patient's going to bed. A day or two later the urethra was irrigated without a catheter, in the manner prescribed, with a 1 : 5000 solution of nitrate of silver, without the slightest discomfort. This was continued daily for a week or more, when the patient was obliged to suspend treatment for a considerable period of time, owing to an enforced absence from home. On his return the irrigations were resumed, with a gradual increase in the strength of the solution, and with marked improvement. It may be added that on two occasions attempts had been made to make applications to the deep urethra through an endoscopic tube, both of which produced extreme irritation. The patient is now nearly well. The pus has disappeared from the second specimen of urine, and only a few *Tripper-fäden* remain in the first.

The foregoing case is reported, not as an example of a cure by this method, for the case is still under treatment, but simply because it illustrates the fact that a sensitive urethra can be irrigated in this manner without irritation.

As to the advantages which this method of urethral and bladder irrigation offers over those usually employed, and which are accomplished by means of the introduction of instruments, it may be said, in general, that there is less danger of septic infection, and far less danger of violence to the parts, and for these reasons it may with greater safety be intrusted to the patient in such cases in which prolonged treatment is necessary.—G. E. Brewer, M.D., in *Med. News.*

THE TREATMENT OF ABORTION.

Something more than a year ago an article by the writer, under the heading of "The Use of the Curette in Abortion," appeared in the *Medical News*, in which a plea was made for the more frequent resort to that instrument in the class of cases under consideration. The present article is designed to further bring out a few of the points to which the majority of the writers and teachers of obstetrics give too little attention. The first of these is the amount of illness which dates from an untreated or poorly treated abortion. The idea which is so prevalent among some members of the profession, that an early abortion is only a slight matter, and needs nothing but rest in bed for a few days, together with the administration of ergot, is to my mind just as dangerous as the idea that a man may marry while he still has a chronic discharge from his urethra. Either of these conditions contains a latent power for evil which should not be overlooked, and both are regarded as trivial, with what serious results any man may see who chooses to trace the etiology of his cases of metritis, salpingitis, and peritonitis, to say nothing of pyosalpinx and pelvic abscess.

With all due deference to the *rôle* which the gonococcus plays in the causation of serious disease of the female generative organs, I think it it is safe to say that we are in danger of losing sight of the important *rôle* played by the ordinary germs of decomposition and suppuration in the causation of the same disorders, simply because our attention has been more forcibly called to the serious effects of gonnorhœal infection. Ordinary septic poisoning is the more important in one respect, inasmuch as it is easily preventable in the great majority of cases. That the danger from this source is not exaggerated is shown by the fact that in the course of an ordinary practice and during the past year there have come under my observation six cases in which life was threatened as the result of neglect or careless treatment, to say nothing of the cases of chronic metritis and subinvolution who date their illness from an abortion.

The two most common results of neglected abortion are sepsis—whether acute or chronic—and hæmorrhage. By hæmorrhage is meant not only that which results while nature is attempting to cast off the products of conception, but also that which occurs later, sometimes after the lapse of a month or more, and is the direct result of the retention of portions of placenta, secundines, or decidua. Acute septic poisoning generally shows itself either as a well marked sapræmia from the absorption of decomposing organic material in the uterus, or as an acute inflammation of the uterus, tubes and surrounding peritoneum. Chronic infection is harder to demonstrate, since many patients who are the subjects of chronic metritis have borne children and have lacerated cervices, and a metritis frequently results from either of these conditions. It does not require a very acute medical vision, however, to see the connection between a foul discharge following an abortion in which the drainage happened to be free enough to prevent systemic infection, and a subsequent subinvolution with leucorrhœa and menstrual disorders. How best to treat these cases and avoid such results is a subject worthy of serious study. In the first place we can expect no brilliant results unless we are cleanly about our work, and to this end antisepsis and not asepsis simply is of the greatest importance. A thorough douching with soap and water followed by a one-half or one-per-cent. creolin solution, or one-to-two-thousand or one-to-

three-thousand bichloride solution, is a necessary preliminary. I know that many cases do well in which all this detail is not carried out, but the acme of perfection, so far as results are concerned, cannot be reached without it. A thorough sterilization of the hands of the physician is another requisite that is too often forgotten because all cases subjected to the danger of infection do not succumb to it. An examination can now be made without danger of rendering the patient worse than she would have been without any attention, and upon the condition which is discovered will depend the further treatment. If the pains are slight, hæmorrhage not severe, and the os not dilated, the use of opium and viburnum prunifolium in full doses with a minute quantity of ergot will often result in a gradual and complete cessation of all dangerous symptoms. The advisability of the use of ergot may be called into question, but I am certain that the combination suggested above has acted better than when the ergot was left out, possibly because the amount used was too small to exert any influence upon the uterine contractions, while it did lower the blood supply to the pelvic organs by its effect upon the arterioles. Of course quiet of both mind and body is requisite if we hope to avoid the threatening danger.

If in spite of a faithful trial of these means or without their being used, the pains are hard, hæmorrhage is threatening, and the os is dilating, the tampon is indicated. Even when the os is fully dilated, if no part of the ovum has passed, it may lead to its expulsion *en masse*, and thus avoid the operation that would otherwise be necessary. This tamponning should be done with cotton wrung from bichloride solution around the cervix, and then completed with baked cotton wrung from sterilized water. These tampons should be removed at the expiration of ten or twelve hours, and replaced again if necessary, but once or twice is all that is desirable. If the os is not dilated or the ovum expelled by this time, it is safe to assume that other means are necessary. I have said nothing about the administration of full doses of ergot to favor the expulsion of the ovum, because I do not believe that it is necessary, and because it is almost as certain to result in the contraction of the circular muscles of the cervix as it is to promote the contraction of the muscles in the body of the uterus. In a case seen recently, two homœpathic physicians were treating a severe hæmorrhage following the expulsion of a fœtus without its envelopes by large doses of ergot, with the result that the patient nearly lost her life before the partly formed placenta could be removed from the cervical canal, where it was caught and held fast by the contractions of the powerful circular muscles.

In all probability the os will have been dilated by the tamponning if it were not so previous to its adoption, and the ovum may or may not have been expelled *en masse*. The number of cases in which this occurs is very small in comparison to the total number of abortions, but it is so desirable that every means should be employed to favor it.

If this has occurred, and a careful examination of the mass shows us that all parts of the ovum are present, including the decidua vera, further treatment is unnecessary, excepting such as will favor the progress of involution. It cannot be insisted upon too strongly, however, that this mass should not consist solely of the amniotic sac and its contents, but that the decidua vera and rudimentary placenta should both be present if our patient is to be regarded as out of danger.

Supposing, as is frequently the case, that some parts of the uterine contents have passed off when we are first called, and that we are uncertain as to how completely the uterus is emptied; the hæmorrhage may have entirely ceased and the cervix be entirely closed, but that is absolutely no evidence that the uterus is empty. Only too often after one has persuaded himself that the trouble is passed, a fresh and alarming hæmorrhage occurs, or he is confronted by a case of septic intoxication. Actual examination of the expelled material is the only positive evidence of the completion of the abortion, and when this cannot be obtained, or if when obtained it shows that every portion of the ovum has not been expelled, the only scientific and exact method of treatment is the immediate removal of the retained portion. This is also true of those cases of incomplete abortion in which, after the lapse of a few days or weeks from the primary symptoms and supposed recovery of the case, hæmorrhage or a foul discharge ensues. Occasionally we will fail to find anything in the uterus in those instances which might be called cases of secondary hæmorrhage, but the bleeding is due to over-exertion, or subinvolution, or both, yet the operation will none the less surely check the hæmorrhage. An assistant is very helpful, but, as I have remarked elsewhere, is not a necessity. A curetting can be done unaided, if help cannot be procured. Two instruments only are necessary. A speculum, either a bivalve or Sims, yet according to whether one is assisted or not, a pair of dressing forceps, a curette, such as that of Recamier, or, what is perhaps better, one shaped like the Sims' sharp curette, but larger and dull, an intra-uterine douche-tube, and a small pair of placenta forceps. With this armamentarium one can undertake to remove thoroughly all *débris* from the uterine cavity and save his patient the danger of sepsis. With the placenta forceps all large loose particles can be removed, the curette will then loosen the adherent decidua, and this can be picked out with

the forceps and washed with the douche. It may be necessary to go over the surface of the uterus several times before the muscular tissue of its walls is felt underneath the instrument, but inability to feel this firm resistance is proof that some soft foreign material still remains. So soon as the curette and forceps bring away no more material, a final intra-uterine douche should be given, and for this purpose a moderately strong solution of bichloride, such as one to three or one to four thousand, is perfectly safe, as the drainage is free and there is no danger of its retention. This should be used until it comes away perfectly clear, when the operation may be considered at an end, and the antiseptic pad placed over the vulva. If a trained nurse is in attendance, sterilized douches for the first week will promote cleanliness and favor involution; but in the absence of a skilled nurse it would be better to leave the patient alone. A week or ten days in bed is usually as long as is necessary, and if care is used in carrying out the details, perfect recovery is an almost invariable result. Subinvolution is rare after this treatment, and if it should occur is readily and rapidly relieved by the use of galvanism with the positive pole in the uterus.

Rarely packing with gauze is indicated, as when the curetting fails to control hæmorrhage, or inflammation has already occurred in the surrounding structures. In the latter case the serous oozing which it causes is of enough benefit to offset its disadvantages. As a routine practice I believe it does more harm than good by preventing the expulsion of any possible clots or small shreds which might have been loosened and left behind during the operation and it is impossible for me to see any indication for its use excepting in the cases above mentioned. This proeedure has its uses, but at the present time it is subject to many evident abuses which are bound in time to react and totally obscure its usefulness.

The three following cases are cited as illustrations of the serious results likely to follow careless or improper treatment:

CASE I.—Mrs. J. P., aged thirty-two, multipara. On June 5, six weeks from last menstruation, was taken with a slight hæmorrhage and some pain which continued for two weeks, but which she persistently refused to believe was due to an abortion. These symptoms gradually ceased, and were succeeded by a slightly foul discharge. The patient was informed of the necessity for removal of the uterine contents, but would have nothing done. July 10, without any warning a hæmorhage occurred of such severity that she lost consciousness within fifteen minutes. The uterus was curetted at once, with immediate cessation of the bleeding, but she has never recovered completely from the effects of the terrific hæmorrhage, and still continues pale and weak.

CASE II.—Mrs. A. B., aged twenty-three, multipara. On January 15, after missing one period, the patient had pains and hæmorrhage with passage of clots and pieces of ovum. She remained in bed for two or three days, when the symptoms all subsided, and she gradually resumed her household duties. Two weeks later she complained of feeling chilly at times, and a foul discharge from the vagina made its appearance. In a few days more she was compelled to go to bed, and when she was first seen her temperature was 105.5° F., pulse very rapid and weak, and she showed every evidence of acute septic intoxication.

The uterus was curetted the same day, and a large amount of decomposing *débris* removed. The next morning the temperature was 99° F., and it never rose above normal again.

CASE III.—Mrs. J. L. C., aged twenty-five, multipara. This patient has had two or three abortions previous to this one, and never suffered any inconvenience from them. On this occasion, after missing one period, she began to flow and pass pieces which she described as looking like flesh. When consulted on July 20 I advised that a curetting was necessary, but this was declined, and she persisted in being up and about. The bleeding was followed by a foul lochial discharge, but she did not consider it necessary to again consult a physician until two weeks later, when a severe pain in the left ovarian region manifested itself. Examination revealed an induration over the entire pelvic floor on the left side. Cleansing the uterus produced only temporary relief, and the patient passed through a three weeks' siege with pelvic peritonitis, with finally an abscess formation on the left side. This was opened and drained through the vagina. She rapidly recovered her general health, but three months later an accumulation of pus took place in the left tube for which abdominal section, with removal or drainage as found advisable, was recommended, but so far has not been accepted.—R. E. Skeel, M.D. in *Inter. Med. Journal.*

CLINICAL REMARKS ON AFFECTIONS OF THE RIGHT SIDE OF THE HEART.

That affections of the left cavities of the heart should seem to outweigh in importance those of the right side is the natural consequence of the fact that disease on the right side is seldom primary, and that its distinctive signs are commonly overshadowed by those of the conditions with which it is associated. It should, however, be remembered that in most cases of valvular heart disease compensation is chiefly effected by means of an increased activity of the right ventricle, that

it is the failure of the latter that precipitates the onset of the common symptoms of backward pressure in the veins, and that so long as the right ventricle can propel the blood the patient may continue to enjoy immunity from urgent symptoms, in spite of extensive valvular disease on the left side. The circulation in such a patient, as I once heard an eminent physiologist observe, in some degree resembles the circulation in the fish. In the fish the blood is driven by the one ventricle through the gills, where it is aërated, and the *vis a tergo* suffices to drive it onwards into the aorta, and so throughout the systemic vessels. In like manner, when there is great destruction of the mitral valve in man, the onward movement of the blood in the aorta must be largely dependent on the *vis a tergo* on the other side of the lungs; and, in a certain degree, proportionate to the damage to the valve, the left ventricle becomes a mere channel for the blood to flow through. Such being the case, it is scarcely necessary to insist on the importance of attending to the condition of the right ventricle in the study of cases of valvular heart disease.

By far the most frequent form of valvular disorder on the right side of the heart is tricuspid regurgitation, and as a diseased condition we meet with it almost daily associated with mitral disease —stenosis or incompetence—or with impeded circulation in the lungs from emphysema and bronchitis. The well-known safety-valve action of the heart is a provision by which, when the right ventricle is over-distended, the chordæ tendineæ pull upon certain parts of the tricuspid valve in such a way that it no longer closes during systole, and a certain amount of regurgitation takes place until the ventricle has got rid of the excess of blood it contained. When dilatation more or less permanent has arisen from excessive internal pressure, the same mechanism comes into play. We then see the familiar symptoms of impeded circulation in the veins, and we may often distinguish a systolic murmur in the tricuspid area. When a mitral murmur is present it may not be easy to decide whether a tricuspid murmur also exists, but the latter may often be differentiated by its having a point of maximum intensity near the sternum. In cases of dropsy depending on lung disease this murmur is often distinct, and in favorable cases may be observed to diminish in intensity, and even disappear as the patient recovers.

But although increase of pressure in the pulmonary artery usually takes effect on the tricuspid valve, in some cases its action is manifested elsewhere. The well-known effect of high tension in the systemic arteries upon the aortic valves would lead us to look for similar effects on the pulmonary valves when tension is raised in the arteries of the lungs. Probably pulmonary regurgitation from this cause would be more frequent than it is were it not for the safety-valve action of the right ventricle, and its occasional occurrence was pointed out by Dr. Fothergill. I have little doubt that it was present in the following case:

Case I.—*Mitral Regurgitation; Obstructive and Regurgitant Murmurs in Pulmonary Area.*—M. M., aged 36, housewife, admitted into the Royal Infirmary under my care in the absence of Dr. Davidson, May 15th, 1893, with dropsy in legs and abdomen. Her illness began eight months before with palpitation and dyspnœa on exertion, followed by swelling in the legs. She denied having ever had rheumatism. When first admitted there was great abdominal distension, which was relieved by successive tappings, and the pulse was quick; but the general condition improved greatly in two or three weeks, and I was able to note carefully and repeatedly the exact conditions of the heart. The pulse was regular in time and force and of moderate rapidity, and was not in the least suggestive of aortic disease. The impulse was in the sixth left intercostal space, 5½ inches from the middle line and 1½ outside the mammillary line. It was regular and strong and no thrill was felt. The second sound was reduplicated, and was loudly accentuated at the pulmonary cartilage. In the mitral area there was a loud systolic murmur, conducted towards the left axilla, and heard at the back. There was also a loud systolic murmur heard at the right border of the sternum at the base of the ensiform cartilage, apparently due to tricuspid regurgitation. In the pulmonary region two murmurs were heard, the one systolic, the other diastolic. The systolic murmur was loud, had the rough quality of a direct murmur, and was conducted towards the left clavicle; the diastolic murmur was soft; it began with, or directly after, the second sound, was heard best in the second left intercostal space close to the sternum, and was also audible in the third space and faintly in the first. In the aortic area a much fainter systolic murmur was heard, probably radiated from the left side; but no diastolic murmur was present, nor was one heard at the lower end of the sternum nor in the carotid artery.

Primary endocarditis is as rare on the right side of the heart as it is common on the left, judging from the extreme infrequency with which signs of inflammation, either old or recent, are found in *post-mortem* examinations in this situation. I once found some vegetations, probably recent, about the size of a split pea, on the margin of the tricuspid valve, when I was making a *post-mortem* examination on the body of a patient who died in the Stanley Hospital some years ago; but I have, unfortunately, not been able to find the notes of the case among the records at the hospital. The following case, treated in the Royal Infirmary,

seems to have been one of rheumatic endocarditis affecting the tricuspid valve:

CASE II.—*Antecedent Rheumatism; Loud Systolic Murmur in Tricuspid Area.*—W. J. R., aged 17, errand boy, admitted under my care, in the absence of Dr. Davidson, June 15th, 1893, suffering from some functional nervous disorder, apparently independent of the condition I am about to describe. He stated that he suffered from shortness of breath and swelling of the legs, and that when 11 years old he was treated in the Children's Infirmary for rheumatism and heart disease. While he was under my care a systolic murmur was audible all over the precordium, and was very loud in the tricuspid area. Its point of maximum intensity was at the left border of the sternum at the level of the fourth intercostal space, and it could be heard to the right of the sternum. In passing from the tricuspid to the mitral area it diminished in intensity, and although it was loud in the former situation it was quite inaudible at the back.

In the foregoing instances the murmurs pointed with tolerable clearness to organic disease on the right side of the heart; but it need hardly be said that murmurs in the pulmonary region generally admit of a different interpretation. Not to speak of hæmic murmurs, which are always systolic, and are hardly likely to be misinterpreted, we sometimes hear a diastolic murmur in this situation, while yet the associated conditions make us hesitate to affirm that pulmonary regurgitation is present. In the following case the interpretation of such a murmur presented no small difficulty:

CASE III. *Mitral Stenosis and Regurgitation; Diastolic Murmur in Pulmonary Area probably Aortic in Origin.*—F. J., aged 16, confectioner, was admitted under Dr. Caton on June 3rd, 1893. She had had rheumatic fever two years, and a second attack seven months, before admission. The heart was enlarged, its action tumultuous, pulse 96; there was a presystolic thrill at the apex, and a diastolic shock at the second left cartilage. At the apex we heard a long, rough presystolic and a systolic murmur, which together occupied nearly the whole cardiac cycle. In the second left interspace a *bruit* was heard with the second sound, having the peculiarity that it lessened in intensity, or even disappeared, at the end of expiration. There was no systolic murmur in the same region, but one was heard at the aortic cartilage. The tumultuous action and the presence of loud mitral murmurs throughout nearly the whole cardiac cycle made the exact differentiation of the diastolic murmur very difficult, but the absence of a pulmonary systolic murmur made it unlikely that there was regurgitation, since, according to Dr. Balfour, in all cases of pulmonary regurgitation the murmur has been double. Further, the pulse was somewhat collapsing, and there was visible capillary pulse; the conclusion arrived at was that there was aortic regurgitation, and that the murmur was really aortic in origin. The indications of the sphygmograph are not often of practical value, but the tracing in this case had a percussion stroke of great amplitude, and so far supported the diagnosis of aortic disease. It is not easy to say why the murmur was not heard in the usual situation.—T. R. Bradshaw, M.D., in *Brit. Med. Jour.*

THE TREATMENT OF LITHÆMIA.

After what I have told you, how this disease is produced by over-eating and over-drinking and lack of exercise, how the oxygenation of these urine products is prevented, how there is more coming in than going out, the treatment plainly presents itself before you. Stop the amount of nitrogenous material ingested; insist upon out-door life and exercise; get the skin function fully to work; this will do a great deal at once. You can cure lithæmic headache in this way, by diet and exercise. What is the best diet for a person forming uric acid and allowing it to remain in the system? My answer is, a vegetable diet, green vegetables, especially spinach, celery, egg-plant, onions, and cabbage—any diet of that kind, with the single exception of asparagus. If a man could become chiefly a vegetarian he would not be troubled with lithæmia. Carbohydrates are not good; starches must be used in moderation. Bread is to be largely forbidden; fatty matters must be taken sparingly, and it is the verdict of lithæmics that sugars do the greatest amount of harm. In addition to this, patients must be restricted in the use of animal foods, unless it be such things as the white meat of chicken and birds, which are not rich in nitrogenous material. Do I forbid meat to my lithæmics entirely? That depends upon the case. If I have a patient who will follow my instructions about exercise, who will indulge in athletics sensibly, and will keep on exercising, he may eat meat in moderation as long as he works it off. If I have a sedentary person to treat, I greatly restrict the diet. Oysters and fresh fish are allowable. Whatever articles of food produce acid fermentation in the body must be avoided by the lithæmic.

What should the patient drink? Water, and plenty of it. Above all, he should avoid alcohol. Patients will tell you that they are accustomed to a certain amount of alcohol, without which they cannot work. If you are obliged to allow alcohol I would recommend it in two forms: whisky considerably diluted, and a good brand of claret. German wines are bad, and champagne is worse on account of the sugar it contains and the acid reaction which it produces. Many persons will

tell you that champagne causes pains in the joints and in the tendo Achillis.

In regard to the matter of taking stimulants, patients will deceive you. I had a case of lithæmia recently which I tried in vain to do something for. I was strict about diet and the usual directions as to medical treatment. At each visit to my office I would ask him if he was temperate and what he took at meals. For breakfast he stated he took coffee without much sugar, fish, very little bread, mostly stale, and water. When I came to lunch, he said it was plain, but upon his hesitating, I asked him if he took anything to digest his food. He said, "Yes, always a quart of claret!" At dinner he took nothing but fish and green vegetables, and it occurred to me to ask him another question, whether he carried out my instructions about drinking water before going to bed, to dilute the acid in the urine. He said he took something to make him sleep, and that "something" was three whiskys! You see how careful you must be about the statements of patients. If you get them to take water, and nothing else, you will do a great deal for their cure.

Now, gentlemen, a few remarks on the strictly medical treatment.

Among the many articles which have been used I will select those only that I know to be valuable. In the first place, I am an earnest advocate of mild laxatives, especially salines, such as Hunyadi water, Saratoga water, phosphate of sodium. I would recommend their use two or three times a week. This makes the liver act better and enables it to get rid of the broken-down waste material. Among other remedies, I have found continued courses of carbonate of lithium very useful. I often give a capsule of two grains of this with a sixth of the extract of nux vomica, and keep patients on it for a long time with great benefit. When the nervous system is much affected you will also obtain at times good results from small doses of arsenic, but always with the laxatives. Whether there are any remedies which directly act on uric acid is a question. Salicylic acid in the form of sodium salicylate is strongly recommended. I do not approve of this as a remedy for any length of time, as it disorders digestion. A similar agent, salol, I have seen give good results. In regard to the new article, piperazine, I like it so far as I have used it; but I do not think it is the solvent of uric acid it is supposed to be. In outbreaks of migraine of lithæmic character, you must relieve pain and get rid as rapidly as possible of the uric acid in the system. You cannot wait for the slow treatment of diuretics; you cannot wait for exercise; something must be given for immediate relief, such as small hypodermics of morphine, for large ones will interfere with excretion, and thus accumulate acid in the system. At the same time active purgatives are to be employed. An eminent physician, who has been himself a great sufferer, recommends for prompt effect dissolving the uric acid in the system with acids. It would be risky to repeat this treatment often. To prevent a recurrence of the attacks, diet is all-important.—Prof. Da Costa, in *Coll. and Clin. Rec.*

THE TREATMENT OF OPEN FRACTURES.

If aseptic surgery had been practiced only in the treatment of open (compound) fractures, it would have accomplished much for humanity. It is safe to say that there are not one half as many amputations performed since the commencement of the present treatment as formerly. Lives have been saved that otherwise would have been sacrificed, and useful limbs are now seen where a few years ago, a wooden substitute was worn as a perpetual reminder of the shortcomings of the surgical art. The aseptic treatment of an open fracture requires first the thorough cleansing of the limb and the wound. The limb should be shaved and washed clean. Irrigation with boiled water is the best means of securing cleanliness of the wound. If there should be venous oozing, it should be stanched with hot water, or irrigated with a bichlorid of mercury solution 1 to 4,000. The styptic effect of this solution is at once seen in the bleaching and drying effect produced. Any spurting vessel should be tied with carefully sterilized catgut. The next step is to secure accurate co-aptation of the fragments, sharp splinters (spiculæ) should be removed, but broad fragments, even when considerably comminuted, should be re-adjusted. The elevator and the heavy bone forceps will be frequently needed to bring the fragments into position. It is well-known that the principal causes of non-union, outside of constitutional causes, are: 1, want of apposition; 2, interposition of muscles; 3, excessive motion. Every care should be taken therefore to avoid these causes of non-union.

Direct fixation of the fragments is one of the most important indications. This may be accomplished by periosteal suture or bony suture. I have many times secured good union in bones of the foot, for example, by the periosteal suturing of the fragments. Chromicized catgut or whale tendon should be used, and a sufficient number of stitches taken to bring the fragments together. In case the obliquity is such the fragments can not be brought together by periosteal suturing, then the osseous suture may be made; after trying many experiments, and experimenting with many kinds of suture, I have reverted to silver wire as being that best adapted to the work. These sutures in some soft bones may be passed obliquely through with a stout needle, but gener-

ally a small drill hole must be made to enable the passing of the wire. The wires must after twisting, be left long and project from the wound so as to facilitate easy removal.

I have had no experience with the use of bone dowel plug placed in the medullary canal to secure fixation. It has seemed to me so liable to be septic, and their must be so many practical difficulties in the way of final removal, as to make it a dangerous appliance.

In five cases I have used the bone ring introduced to the notice of the profession by Professor Senn. In every case there was suppuration, and I have abandoned it, until such time as we shall be enabled to sterilize the ring. It is yet so far from perfection in that regard, as to make it almost certain that the wound will become infected. The principle may be yet found useful by the invention of some different material. The bone ring (or thimble) has one advantage, that is the great amount of exudate (forming. So pronounced is this effect, that in cases of ununited fracture where there is no attempt at the formation of callus, the ring may be used to advantage notwithstanding its general lack of sterilization.

The condition of the soft parts must next be looked to. Indeed it is a matter which is scarcely secondary to the proper treatment of the fractured bone. Wounded tendons, torn muscular structures and lacerated nerves should be sutured according to the rules laid down for respective tissue involved. Stout chromicized catgut will be found useful for tendons, and fine flexible catgut for nerves. In case the distal and proximal ends of a nerve or tendon can not be brought together, they may be sewed to the nearest adjoining nerve or tendon. All this takes time, but it will be well spent. When the wound is cleaned the bones are brought together, and the soft structures thus attended to, then irrigation is again practiced and the external wound closed by sutures of silkworm gut. Extension is usually not necessary if the fragments have been brought into perfect apposition, nor is there much difficulty in retaining them. External support should be secured by a plaster-of-paris bandage, and when necessary a fenester cut opposite the wound.

In complying with the wishes of our distinguished chairman, to keep within the ten minute line, it will be seen that I have chosen rather to support the existing practice, than to compile the literature of the subject, and if more attention shall be directed to methods of suture of the soft parts, in addition to bone fixation, the paper will have served its purpose.—Jno. B. Hamilton, M D,, LL.D., in *The Journal.*

PRESCRIPTIONS.

FOR WHOOPING-COUGH.

℞—Sulphonal . . . . . gr. j.
Creasoti, ... ♏ij.
Syrupi Tolutani.
Aquæ, ... āā ℥ij.
Misce et fiat mistura.
Two teaspoonfuls to be given every two hours.

FOR AMENORRHŒA.

℞—Hydrargyri Perchloridi, . . gr. ¾.
Sodii Arseniatis, ... gr. j.
Ferri Sulphatis Exsiccatæ, . gr. xxx.
Potassi Carbonatis, ... gr. xv.
Extracti Nucis Vomicæ, . . gr. v.
Misce et divide in pilulas xxx.
One pill to be taken before each meal.

FOR BRONCHORRŒA.

℞—Copaibæ, ... ℥iij.
Tincturæ Chloroformi Compositæ, ♏xx.
Mucilaginis Acaciæ, ... ℥vij.
Liquoris Potassæ, ... ℥j.
Aquæ Cinnamomi ad, ... ℥viij.
Misce et fiat mistura.
An eighth part to be taken three times daily.

FOR BRONCHITIC ASTHMA.

℞—Extracti Stramonii, . . . gr. ⅛.
Potassi Iodidii, ... gr. v.
Ammonii Carbonatis, . . . gr. iv.
Tincturæ Lobeliæ Ætheræ . ♏v.
Aquæ Chloroformi ad, . . ℥ss.
Misce et fiat mistura.
A tablespoonful every four or six hours.

PASTE FOR ECZEMA.

℞—Acidi Salicylici, ... ℥j.
Zinci Oxidi, ... ℥iij.
Pulveris Amyli . . . . . ℥iv.
Adipis Lanæ Hydrosi, ... ℥j,
Misce. Fiat unguentum.
To be applied daily.

—*Practitioner.*

A NEW METHOD OF ADMINISTERING CREOSOTE. —(*New York Medical Record*, March 10, 1894.) By Dr. R. W. Wilcox.

The writer states his belief that in creosote we have a very valuable remedy for pulmonary tuberculosis, but it requires to be administered in large doses, two to three drachms a day, which may give rise to untoward, even poisonous, symptoms. In his experience guiacol, even in doses proportionate to its percentage in creosote, is by

no means equally efficient. Hitherto he has been most successful in the administration of creosote in the form of enteric pills, but even with these, gastric irritations, backache, and malaise occasionally occur. Very lately he has used the carbonate of creosote, that is beechwood creosote (ninety-two per cent.), in chemical combination with carbonic acid (eight per cent.). It is a clear, pale, almost colorless liquid of syrupy consistence, becoming thinner by heat. It is insoluble in water, but soluble in alcohol, or in four to five parts of cod-liver or olive oil. It has a slight odor of creosote, and an oily, slightly tarry taste, which is in marked contrast to the burning taste of creosote. It can be administered clear or by hypodermic injection. Dr. Wilcox prefers its administration in either hard or soft gelatin capsules containing ten or twenty minims each. In large doses it may give a dark green color to the urine, an indication to diminish the dose, but this is apparently the only untoward symptom. There is no malaise, nor irritation of the stomach or intestines. Dr. Wilcox thinks that fifteen to twenty drops per day is probably a sufficient dose for children, but adults may take one, two or even four drachms per day in divided doses.—*Inter. Med. Mag.*

DIPHTHERIA TREATED BY ANTITOXIN.—The following case, with its highly satisfactory result, seems worthy of record, for, although a single instance of any treatment can have but little scientific value, and it might, therefore, have seemed wiser to wait until one could publish a series of cases, I have thought that by recording this, the first case of antitoxin treatment of diphtheria at Guy's Hospital, others might be encouraged to make further experiments speedily. We may thus the sooner ascertain how far we have in antitoxin an effectual therapeutic agent against diphtheria. I am indepted to Dr. Goodhart for kind permission to publish the case, which was under his care:

J. C., aged three years, was admitted at 2 p.m. on June 23rd. It was said that he had been at play, and apparently quite well that morning. At midday he complained of his throat, and had croupy cough, and respiration soon became difficult. On admission there was considerable inspiratory stridor, and some "sucking in" above and below the clavicles, and also in the lower intercostal spaces. On the right tonsil was a patch of membrane. The tonsils and fauces were very slightly injected and swollen. The temperature was 102.4°, the pulse 140, and the respiration 34. The color was good, but the child was distressed and restless. Tracheotomy seemed imminent, but the operation was deferred till bed and steam kettle had been tried. At 4.30 p.m., antitoxin ℥xj was injected hypodermically in the forearm, with strict antiseptic precautions. At 6 p.m. the patient seemed more comfortable. The temperature was 92.2°; respiration continued difficult, but the patient was less restless and slept fairly well during the night.

June 24th. The temperature was about 99° all day, the pulse 128, and the respiration 32. The child was again becoming restless, and stridor was increasing. Antitoxin ℥viij was injected at 4.30 p.m.

June 25. The stridor was much less. The child was playing and talking and took solid food; the temperature was normal.

From this time the stridor decreased. The child seemed perfectly well, playing and laughing merrily, although the cough remained croupy until June 27, and membrane persisted on the tonsil until June 30th, that is, seven days.

The diagnosis was made certain by cultivation from the membrane.

The only additional treatment adopted was a steam kettle and tent bed, and brandy ℥xxx every four hours. A spray of iodine and carbolic acid was tried twice on June 23rd, but as the child objected it was not used again. The antitoxin used (kindly given by Messrs. Zimmermann & Co.) was Schering's. Whether the favorable result was *post hoc* or *propter hoc*, it is noteworthy that the subsidence of constitutional disturbance was extremely rapid, occurring within a few hours after the injections; that the constitutional improvement occurring while the visible membrane persisted, apparently without corresponding improvement; and last, but not least, that the injection would seem to be entirely innocuous, being followed by neither local nor general disturbance. —*British American Journal.*

ABSCESS IN THE RIGHT CEREBELLAR HEMISPHERE, ASSOCIATED WITH PARALYSIS AND FITS LIMITED TO THE SAME SIDE.—The surprise and disappointment experienced by my colleague, Dr. Hume, and myself in connection with the following case will be readily understood after perusal of the brief record I venture to submit to the readers of the *Lancet*. It is, I think, at all times expedient to give publicity to our failures, but it is an imperative duty we owe to the profession to make known our misfortunes when an exception, real, or apparent, to a well established principle happens to underlie them. The disappointment was intensified by the fact that the attempt to interpret the clinical symptoms aright was made with great care.

The patient, a girl nine years of age, was sent into the Royal Infirmary by a medical man who furnished the statement that for some years there had been a purulent discharge from the right ear, and that a few days prior to her admission headache, vomiting, paralysis of the right arm, and

right-sided convulsions developed. The child was well grown, but thin. She lay in bed on the left side. The right arm was helplessly paralysed, the right angle of the mouth was weak, and the leg on the same side showed evidence of paralysis, though certain voluntary power remained. Every hour, and sometimes more frequently, the fit returned. The spasm began in the face and almost immediately extended to the arm and occasionally to the leg, but remained limited to the right side. During the interval between the fits the child seemed to regain consciousness, and without doubt she did so when the interval was unusually lengthened, and then it was observed that she was completely aphemic—that is to say that she seemed completely unable to utter a syllable, though to a certain extent she understood spoken language. There was early optic neuritis. No obvious discharge was to be detected from either ear, though cotton wool introduced into the right meatus was soon moistened with offensive purulent fluid. The side affected with spasm and paralysis (the right) of course suggested a lesion in the left temporo-sphenoidal lobe, and a careful examination was made for evidence of left middle ear mischief, and was found in the shape of a perforation and some fœtid discharge. It was therefore decided to explore the temporo-sphenoidal lobe on the left side in search of an abscess. This my surgical *confrere* Dr. Hume, did in the usual way, but without success. He next trephined over the left arm-centre, but we were again disappointed. Finally he explored the left lobe of the cerebellum, but with a like result. During the few days succeeding the operation the patient seemed to be somewhat better, at all events the fits were less numerous and consciousness was regained, but the arm remained paralysed and the speech defect was unaltered. She died a week later, and at the post-mortem examination a large abscess cavity, holding about an ounce of pus was found, in the right lobe of the cerebellum, located near the surface and about three quarters of an inch from the medulla. The left cerebral hemisphere presented no pathological changes other than the usual subarachanoid hæmorrhage consequent upon the exploratory punctures. Both tympanic cavities were extensively diseased. I may say that I made the post-mortem examination myself and searched carefully for a lesion on the brain that would explain the right-sided paralysis and convulsions, but found none. It will thus be seen that any attempt to explain the symptoms by direct pressure upon the motor tract below the decussation is highly unsatisfactory; but apart from the remote situation of the abscess, pressure on the medulla would scarcely cause localized convulsive seizures, nor would it paralyse the facial muscles. We are, indeed, forced to conclude that the explanation lies in one of two directions: either a lesion in the left hemisphere has been overlooked, or the paralysis and fits, limited to the right side, were the result of some indirect influence (reflex) arising through the known connection between the right cerebellar lobe and the motor cortex of the left cerebral hemisphere. The case is to me a great puzzle, especially as I am convinced the former hypothesis is incorrect. —*Lancet.*

"KLEPTOMANIA."—The close connection between moral error and mental disease is a circumstance which constantly imposes upon the practitioner a difficulty of the same duplex character in relation to diagnosis. Moral alienation, it is well known, indicates from a very early stage the decay of the reasoning faculty. Moral insanity, in like manner, denotes that mental state which exhibits in its feeble and absolute submission to the senses the failure of healthy self-control. Among its innumerable forms, an interest which is not entirely patholigical attaches to the sometimes rather comical vice of "kleptomania." The question of criminal responsibility overshadowed by this term brings it more or less within the scope of public opinion. There are, no doubt, a number of cases which illustrate only what may be styled the disease. They are manifestly related to other like extravagances of manner and action, and are the obvious effects of insane suggestion. The thefts of the imbecile and the general paralytic belong to this class; others, however, show some connection with method and motive. These, especially if unrelated to other signs of insanity, must be regarded with suspicion. There is, for example, a practical difference between the act of a person otherwise sane enough, who impulsively pockets your household silver, and that of another, who vainly labors as in a case actually recorded, to stow the coal-scuttle in his nether garments. In deciding the question of responeibility, therefore, the evidence of motive and the presence of other and grosser mobid symptoms, espcially the latter, should, in our opinion, be allowed to exercise a most important influence.—*The Lancet.*

IN the report of an inquest held last week respecting the sudden death of a servant, the cause of death was defined in the following words:—"Owing to decay part of the heart had become detached, and, travelling up the main artery, it had reached the head, where it completely blocked the cerebral arteries. No medical skill could have saved her life!" Clearly as all the heart could not take a holiday at once, this was apparently an instance in which it endeavored to do so in detachments. But even then the results were disastrous.—*Medical Press.*

Reports of Societies.

REPORT OF THE CANADIAN MEDICAL ASSOCIATION.

The twenty-seventh annual meeting of the Canadian Medical Association was held in St. John, N. B., August 22nd and 23rd. Dr. T. T. S. Harrison, of Selkirk, Ontario, presided, Dr. F. N. G. Starr, of Toronto, acting as secretary.

After opening, Dr. Jonah, of Eastport, was introduced to the Association as representative of the Maine Medical Association; and Dr. Bulkley, delegate from the American Medical Association. Dr. Charles O'Reilly, I. H. Cameron, and J. E. Graham, delegates of the Ontario Medical Association, were also present and accorded a hearty reception.

A large number of new members were proposed, principally from the Maritime Provinces.

Letters of regret were read from Sir Charles Tupper, Dr. Osler, Dr. Marcy, Dr. Bray, Dr. Mullin, and Dr. McLean, of Detroit.

Dr. Hattie, of Halifax, read a paper on "Epilepsy," which consisted of the explanation of the possible cause of the trouble. This was the result of certain experiments and observations he had made on epileptics. He reported what had been discovered after post-mortems made on epileptics, but these changes in the cells were probably the result of the nerve storm, rather than a cause of it. The more probable cause lay in the action of some toxic irritant which was the result of some systemic disease. He pointed out that anæmia was present in epileptics, and said that it might be the condition upon which the disturbance depended. On the supposition that the poison might be absorbed from the intestinal tract, he had administered intestinal antiseptics with the bromide; he compared the number of fits during a given time with this treatment, with the number occurring when the bromide alone was given, and when nothing was given at all. The new treatment showed a marked decrease in the number of convulsions.

After the discussion of his paper by Drs. Cameron, of Toronto, and Wright, of Ottawa, Dr. Muir, of Truro, N. S., reported the history of a case of local tuberculosis of the arm which had been cured after the accidental inoculation of erysipelas. The patient was a female, aged 39, who had been suffering from the disease for 14 years; the arm between the elbow and the wrist being very much swollen, brawny, riddled with sinuses, which were discharging most offensive pus. Under chloroform these sinuses were scraped out and antiseptic and deoderant dressing applied. There was little improvement in the condition until after the wound became infected with the erysipelatous germ. The result was that the arm completely recovered. The paper was discussed by Dr. Daniels, Dr. Shepherd, Dr. Bulkley, Dr. Cameron, and Sir James Grant; Dr. Muir closing the discussion.

Dr. Harrison delivered his presidential address, taking as his subject his observations and experience in medicine during the past fifty years. He compared the diseases in existence then with those we have now. Since the clearing up of the country in the Province of Ontario, the miasmatic diseases had become things of the past. He referred to the horrible concoctions of domestic medicine, such as an infusion of sheep excrement for measles, and that of a cat, which he said might not be considered a bad substitute for asafœtida, was the "sovereignest" thing in fits. The old veteran referred to many practical points in his practice. He pointed out the danger a man was in of becoming egotistical, or of getting into a rut, when he was so far removed from other medical men. The corrective of this he considered to be the attendance of medical associations. A considerable portion of the address was taken up in discussion of the question of inter-provincial registration. Every practitioner in Canada, he considered, should have the right of practising in any part of the Dominion, without having to submit to an examination. He believed in a high standard, both as to matriculation and graduation.

The President was accorded a hearty vote of thanks, moved by Dr. Bayard, of St. John, seconded by Dr. Hingston, of Montreal. Dr. Wright, of Ottawa, moved, seconded by Dr. I. H. Cameron, of Toronto, that a committee be appointed, representing the various provinces, to consider the suggestions made in the President's address with regard to the question of inter-provincial reciprocity.

Dr. James Bell, of Montreal, read a paper on "Appendicitis." It was a review of his work in the Montreal General Hospital during the past eleven months, in connection with the surgical treatment of this disease. He had had 48 cases; 40 were operated upon; 8 were not; all recovered except 3. He advocated that appendicitis should receive treatment at the hands of the surgeon from the beginning of the attack. In the great majority of cases he believed, as soon as the diagnosis was completely established, operation should be resorted to. The interesting reports of his cases seem to bear out his view in this respect.

Dr. Hingston, of Montreal, took the conserva-

tive side of the question. He had prevented the operation about thirty times, and only regretted that he did not operate in one case. He did not want the younger members of the association to go away with the idea that operation was the thing in every case they had. Dr. Bell was a distinguished surgeon, first; and, second, the cases he saw were the worst types.

Sir James Grant reported two cases of appendicitis, one the gouty form, the other rheumatic. He found it difficult to decide when to operate, and he knew of no more perplexing point in surgery. It required great observation, discrimination and judgment to know how to deal with them. He did not believe the trouble was due to concretions found in the organ. He attributed the causation to the insufficient time taken to masticate food, and allied causes common to the rush of to-day.

Dr. Shepherd pointed out that the surgeons get the worst cases, so it was difficult to say just what the proportion of cases was which were operated on. Some one had spoken of unloading the cæcum at the beginning of the attack; he had never found or heard of anything being found in it at the *post-mortem* table. He advocated operating in the interval as the safest time. In regard to McBurney's point, he thought the tenderness was due, not to the appendix, but to the inflamed condition of the mesenteric glands.

Dr. Strange believed in non-interference till there was evidence of pus; and then to open the abscess, as one would any other abscess. He leaned to the conservative treatment from his experience with the disease.

Dr. Cameron was in favor of the conservative line of treatment. In the majority of his cases he had not operated at first, and had found his results to be as good as those in which the operation was performed in every case early. He thought it unfortunate that the experience of a hospital surgeon of skill should determine the matter one way or the other. With regard to the gangrenous form due to embolism of the appendiceal artery, one should operate. He agreed with Dr. Shepherd that the interval was the time to operate. The difference was, Dr. Shepherd operated before pus formed and closed the cavity; while he (the speaker) did not operate till pus formed, and he did not close the cavity.

In replying to the discussion on his paper, Dr. Bell made a strong plea in favor of his statement —"one should always operate." It was generally agreed that no one knew when to operate, and if the patient were left, at any moment perforation might take place. However, in the forty cases he had operated on 30 were perforated and abscess was present at the time of operation; in three the appendix was wholly gangrenous, and here, he said, one could not wait for the tumor formation or the abcess. In two the appendix was bound down; in three it was not perforated, but gave rise to urgent symptoms, yet there was no abscess found. He used to follow the waiting treatment, but found it unsatisfactory. The mortality was much greater than that of his eleven months of the new plan. The greatest mortality statistics for the operation only amounted to from two to three per cent. The operation as a rule was not difficult. He considered the plan of waiting for pus not the best surgery The very mild cases, where the symptoms passed off in, say 12 hours, he would not interfere with; they were probably only cases of caecitis.

"Eye-strain Headaches," was the subject of a paper read by Dr. Morrison, of St. John, N.B. He gave an extensive list of such cases where the true cause had not been found, and as a consequence the varied forms of treatment gave satisfactory results, only in so far as they gave rest, unconsciously, to the eyes, and supported the general bodily health. A school boy had Wednesday headaches, resting Saturday and Sunday from study, the eyes stood the strain till Wednesday, when he was obliged to lie off. Suitable glasses directed to the correction of the astigmatism and hypermetropia effected a cure. Often the patient was treated for a long time for some other disorder altogether. The eye should, in the headache cases, be taken into consideration; for, he affirmed, 90 per cent. of all cases were due to eye-strain Treatment must be directed to a correction of the mechanical defects in the cornea; to strengthen the delicate muscle of accomodation, by tonics and massage; for young ladies he recommended gymnastic exercises.

Dr. Laphthorn Smith, of Montreal, followed by a paper on "The Treatment of Diseases of the Ovaries and Fallopian Tubes." The subjects of gonorrhœal and tubercular salpingitis, tumors of the ovaries, ovarian congestion and neuralgia, were elaborately referred to, their most prominent symptoms pointed out, and also their treatments. The paper was practical, inasmuch as numerous histories of cases were recited, and pathological specimens shown.

Thursday, a.m.

The Nominating Committee brought in the following report:—President, Dr. Bayard; General Secretary, F. N. G. Starr, M.B., Toronto; Treasurer, Dr. Small, Ottawa; Vice-Presidents, Drs. Shaw, of Hamilton, Ont.; Armstrong, Montreal, Que.; McLaren, New Brunswick; McKeon, Nova Scotia; Blanchard, Man.; Haultain, N. W. T.; Maclaren, P. E. I.; Edwards, B. C. Provincial Secretaries for the above Provinces named in order: Fenwick, of Kingston; Campbell, of Montreal; McNally; Hattie; N. S. Nelson, Man.; Macdonald, N. W. T.; McNeil, P. E. I.; Richardson, B. C.

"The Influence of the Mind on the Body," was the subject of the address on medicine, delivered by Dr. Bayard, of St. John, N. B. In a concise way the Doctor gave a *résumé* of the general anatomical and physiological features connected with the nervous system, and pointed out that various mental phenomena were causative of marked change in the body, particularly in respect to the action on the vaso-motor nerves. He had known pain to disappear in the presence of sudden danger; and he quoted Hunter as saying, "My life is at the mercy of any scoundrel who chooses to put me in a passion;" and, strange to say, that was the cause of his death. It was believed that the elaboration of the blood constituents was interfered with when the individual was under emotional excitement. He then proceeded to discuss the various nervous troubles so common to-day, and suggested means for their prevention.

"The Use and Abuse of the Various Cautery Agents in the Treatment of Nasal Affections," was treated by E. A. Kirkpatrick, of Halifax. He referred first to the delicacy and importance of the nasal mucous membrane, and said that too often it was the subject of harsh treatment. Caustics were used, perhaps, more in hypertrophic rhinitis than in anything else, and often too severely. Of the caustics he said chromic acid, trichlor acetic acid and the electro cautery were the principal. The chromic acid he used in anterior applications, the cautery for the posterior applications. By the injudicious use of caustics he had seen the mucous membrane destroyed. And in some cases he had seen very serious sequelæ follow in connection with the ear; such as loss of hearing, and mastoid disease.

Dr. J. E. Graham presented a paper on "Some Forms of Functional Derangements of the Liver." The paper dwelt on the great importance of maintaining the integrity of the hepatic cells. They acted as a guard against the invasions of certain forms of poisons into the general circulation—such as arsenic and phosphorous among the mineral kingdom; the poison of decaying meats and old cheese, in the organic; absorption of poisons generated in a distended stomach; the specific toxines of typhoid and such diseases; and the absorption of poisons from the intestinal tract as when constipation was present. These various poisons tended to injure the cells, and passing into the general circulation produced their effect on the nervous and other systems of the body. In the ordinary cases of biliousness the symptoms were pointed out as depending on functional disturbance of the liver cells, and consequent absorption of ptomaines, etc. The glycogen and urea producing functions of the liver were also discussed, and the results of their abeyance pointed out through the damage done to the hepatic cells. As to treatment, Dr. Graham urged the absolute necessity of finding the exact cause of the disturbance, before rational treatment could be employed. He recommended restriction and regulation of the diet; suitable exercise to assist the circulation; proper attention to bathing, drinking of mineral water to promote metabolism, where the urea was deficient; the necessity of free purgation; and, lastly, the various specific remedies recommended for this condition.

Dr. Hingston, of Montreal, reported four cases of brain operations, two of which were for epilepsy. A third was for the relief of a young man who had received a skull injury some twenty years before, which had resulted in paralysis of certain muscles of the arm, and spasm of certain of the muscles of the face. Operation afforded almost complete relief. The Doctor showed the kind of trephine he used, being one two inches in diameter. He pointed out its advantages over the smaller ones.

Dr. F. J. Shepherd, of Montreal, reported a case of "inter-scapulo thoracic amputation," the first, he believed, that had been performed in Canada. It was in a stout woman, for a chondro-sarcoma surrounding the shoulder joint, which was causing serious pressure symptoms and inability to use the arm. The Doctor described the technique of the operation. The principal point of difficulty was in reaching the subclavian artery. He left the scapula intact.

He also reported the removal of a large enchondroma of the pelvis, which appeared as a continuous growth with the ilium. He (the patient) had been refused operation in New York and Philadelphia. Upon dissection it was found to be sub-gluteal, and only having two attachments. Its removal was comparatively easy. The reader of the paper presented photographs of the cases. He also reported the removal of a cirsoid aneurism, which gave him a great deal of trouble in checking the bleeding.

Dr. Buller, of Montreal, read a paper on "The Present Status of Asthenopia."

Dr. Inches, of St. John, N. B., read a paper on "The Prevention of Tuberculosis." He pointed out the danger of infection from diseased animals in their meat and milk, stating that in herds of cattle sometimes as high as 98 per cent. of the animals were affected. Then there was the great danger from the sputum of the tuberculoses patient. Of course, suitable soil was necessary for the growth of the bacillus. He stated that in the perfectly healthy individual it could not propogate, or was not likely to; but in very many the general health was lowered either by hereditary predisposition or through unsanitary surroundings. For its prevention, the first thing to be attended to, was the injunction of perfect cleanliness as regards the sputa, on the part of the infected patient. The second was the establishment of special hos-

pitals for this class of sufferers. Those patients who belonged to the wealthy classes might be treated otherwise, but for the great majority of the cases separate hospitals were exceedingly desirable. In Italy their establishment had lessened the mortality very greatly.

"Some Practical Points in the Treatment of Diseases of the Skin," was the subject of a paper by Dr. Bulkley, of N. Y. He emphasized the necessity of the most careful examination and note-taking in these cases, at every visit of the patient, and the necessity also of persistent treatment. In eczema, he said to be careful about the use of new remedies. He was much opposed to the indiscriminate use of arsenic. He recommended the use of the alkalides to combat the acid state of the blood found in eczema. Acetate of potash was what he used. Externally the custom was to use two irritating ointments. One of his favorite prescriptions was—

℞.—Ac. carbol,	. . . .	one-half drachm.
Calamine preparata,	.	one drachm.
Zinci ox.,	. . . .	two drachms.
Glycerin.,	. . . .	three drachms.
Aq. calcis,	. . . .	four drachms.
Aq. rosæ,	. . . .	four ounces.

But he had found that the correction of some fault in diet or habit of the patient, and the administration of hygienic and tonic treatment of the greater importance. He also went into the subject of acne and other common troubles, and mentioned some very valuable points.

Dr. Laphthorn Smith gave a very interesting exhibition of the use of the galvano-cautery, in which the street lighting current is used. He showed how simple, and far superior it is to the old battery arrangement. The cost was trifling.

Dr. MacDonald, of Hopewell, N. S., addressed the Association on the "Prevention of Tuberculosis," in which he drew attention to the fact, that of 67,688 deaths in the Dominion, 7,490 were from consumption. His object was to direct attention to means for its prevention. This consisted in the destruction of the bacillus-laden tissue or sputa. He referred to what had been done in the way of prevention in Pennsylvania, Nova Scotia and other places. He was anxious that the profession should urge upon the State the necessity of progressive action in the way of notification, registration and the establishment of sanitaria, both for the sake of the patient and the safety of his friends.

Dr. Hamilton, of Montreal, read a paper on "Adhesions of the Soft Palate and their Treatment."

"A Medico-Legal Romance" was the subject of an interesting paper by Dr. Steves, of St. John Lunatic Hospital.

Dr. Fenwick then presented a paper on "Hysteropexy."

After the customary votes of thanks the meeting closed. The next meeting of the Association will be held in Kingston, Ontario.

A THERMOMETER REMOVED FROM A MALE BLADDER.—The *Medical Press* describes the following unique case:—It is well known that foreign bodies of curious types may be sometimes found in the female bladder, for the female urethra, owing to its structure, does not much interfere with the wilful insertion of hair-pins and other such substances. The case, however, is very different when the male urethra is concerned. Experience teaches that it is not common for the surgeon to be called upon to remove a foreign body which has been intentionally introduced into the male bladder. However, a curious instance of the kind has just been recorded by Le Dentu. A young Breton, aged 26, was admitted under his care into the hospital with a history of having suffered for ten years from bladder symptoms. Micturition was frequent and painful, and the urine contained blood and a large quantity of pus. Exploration of the bladder with a sound revealed the presence of a calculus, the precise size and relations of which it was impossible to ascertain, owing to the extreme irritability of the bladder. A supra-pubic cystotomy was performed, and when the bladder was opened a long and thin almost immovable calculus was found. An endeavor was made to extract the calculus entire, but this was unsuccessful; accordingly a pair of strong forceps was introduced into the bladder and the foreign substance was broken in half; the fragments were then easily removed. Subsequent examination showed, as had been suspected during the course of the operation, that the calculus had formed around some foreign body, and further investigation revealed that the latter was a thermometer, the length of which was ten centimetres. The patient made a good recovery. The interesting feature of the case, about which, however, the author says nothing, is the circumstances under which the thermometer came to be inserted into the bladder. It is curious, too, that for ten years the patient had never come under the care of a surgeon who had detected the presence of the foreign body.

THE CANADA LANCET.

A Monthly Journal of Medical and Surgical Science, Criticism and News.

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AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MAHLER 23 Rue Richer, Paris.

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The LANCET has the Largest Circulation of any Medical Journal in Canada.

ANIMAL EXTRACTS.

It is to be regretted that the introduction of animal extracts has been attended with so much quackery. Doubtless marked and beneficial results have been obtained from the administration of Thyroid Extract in some cases of myxœdema.

It must be remembered, however, that the thyroid is a secreting gland, which has been shown experimentally to have a direct effect in the production of this disease, and one can easily understand, that, if through a deficiency in quantity or quality of its secretion, a pathological condition arises, the administration of an extract of the gland, by supplying the deficit, might bring about a return to the normal condition of affairs. This may warrant its use in diseases evidently arising from affections of the thyroid gland, but its employment in lupus, internal tuberculosis, cancer, etc., as we have seen it recommended, is, in the light of our present knowledge of pathology and bacteriology, most unscientific, and can only have the effect of bringing the remedy into disrepute. The action of nervine, cerebrine, cardine and numerous other "*ines*" are not supported by such scientific evidence, and it is to these we refer in speaking of quackery. As well might one attempt to restore an amputated leg by the use of *Crurine*, *Genuine*, and *Pedine*, as expect cerebine to form a new corpus striatum, in place of one that has been ploughed up by the blood from a ruptured middle cerebral artery. A very unpleasant and disgraceful feature of this subject, is the way in which these extracts are being advertised, not only in medical journals, but in the public press.

The pendulum of medical thought is seldom at rest, and as with almost every new remedy, so will it probably be with thyroid extract; received with open arms as a panacea for almost all ills; rejected as quickly and fervently as accepted, when found unqualified for the position to which it was assigned; and eventually, after serving a long apprenticeship, become installed again in general confidence, but with very much limited functions.

THE MICROSCOPE IN MEDICINE.

Microscopy is not only an interesting study, but is rapidly becoming, in fact has become, a very necessary part of the modern physician's means of diagnosis and consequent guide to treatment. While a few years ago much valuable time was lost waiting for physical signs to develope, in order to settle the diagnosis, in the present day, with our staining reagents and microscopes, we are able to demonstrate the existence of tubercular disease, in many cases, long before the pleximeter and stethescope afford anything but negative signs.

The results of treatment in the later stages of phthisis have not materially altered from those of former years, but in those cases recognized before any extensive damage to lung tissue or interference with the general health has taken place, large numbers of recoveries have been reported, and much unnecessary expense and suffering avoided. If only for the sake of these cases, which exist in such large numbers, every practitioner should be possessed of a microscope and understand the preparation and examination of sections.

But these are not the only cases in which a microscope is of value. Diseases of the blood may be readily recognized, the differential diagnoses accurately made, and the effect of treatment carefully watched.

In diseases of the genito-urinary organs, and frequently in affections of the skin, the microscope is indispensable to both the physician and surgeon. It should be impressed upon the student at the beginning of his course, that a microscope is absolutely necessary for the proper persuit of his studies, both before and after graduation. Auscul-

tation may be done by the immediate method, but one cannot do microscopical work with the naked eye. The management of the microscope is quickly and easily learnt, the staining and preparation of sections being merely a matter of technique. The expense is insignificant when compared with the immense advantages to be derived from its use.

MEETING OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

The American Association of Obstetricians and Gynæcologists will hold its seventh annual meeting, in the Council chambers of the College of Physicians and Surgeons, at Toronto, Ont., on Wednesday, Thursday and Friday, September 19th, 20th and 21st, 1894.

The following is the preliminary programme:

1. President's address, George H. Rohé, Catonsville, Md.

2. Personal Experience with Pus Tubes: When to Operate, How to Operate, and the Results of Operation, James F. W. Ross, Toronto, Ont.

3. Relation of Hysteria to Structural Changes in the Uterus and Adnexa, A. P. Clarke, Cambridge, Mass.

4. Demonstration of a Mechanism of Intussusception (rabbits), Robert T. Morris, New York.

5. Nephrectomy, L. H. Dunning, Indianapolis.

6. Treatment of Distension of the Fallopian Tubes without Laparotomy and Removal, Frank A. Glasgow, St. Louis, Mo.

7. Hysteria in Pregnancy, W. P. Manton, Detroit, Mich.

8. Relations of Renal Insufficiency to Operations, Carlton C. Frederick, Buffalo.

9. *(a)* Importance of Recognizing Septic Puerperal Endometritis early, and its Treatment; *(b)* Demonstration of a Portable Operating Table for Gynæcological and Abdominal (Trendelenberg) Work, Edward J. Ill, Newark, N. J.

10. Suspension of Retroflexed Uterus by the Utero-ovarian Ligaments, with Report of Cases, Reuben Peterson, Grand Rapids, Mich.

11. The Element of Habit in Gynæcic Disease, Geo. F. Hulbert, St. Louis, Mo.

12. Some Results of Ether Anæsthesia in Abdominal Operations, I S. Stone, Washington, D. C.

13. Report in Abdominal Surgery, Presenting Cases, A. Vander Veer, Albany.

14. Supplementary Paper on Abdominal Section in Intrapelvic Hæmorrhage, M. Rosenwasser, Cleveland, O.

15. Conservative Midwifery, J. M. Duff, Pittsburg, Pa.

16. The cause of the Thirst following Abdominal Section, Eugene Boise, Grand Rapids, Mich.

17. The Care of Pregnant Women, W. B. Dewees, Salina, Kansas.

18. The Present Status of the Surgical Treatment of Uterine Fibroids, Lewis S. McMurtry, Louisville, Ky.

19. *Discussion.*—Inflammatory Disease of the Uterus and Appendages, and of the Pelvic Peritoneum; *(a)* Introductory Remarks, Wm. Warren Potter Buffalo; *(b)* Historical Sketch, Edward J. Ill, Newark, N. J.; *(c)* Clinical History, Chas. A. L. Reed, Cincinnati, O.; *(d)* Causation and Pathology, Lewis S. McMurtry, Louisville, Ky.; *(e)* Diagnosis and Prognosis, James F. W. Ross, Toronto, Can.; *(f)* Treatment, M. Rosenwasser, Cleveland, O.; A. Vender Veer, Albany, N. Y.; J. H. Carstens, Detroit, Mich.; A. H. Cordier, Kansas City, Mo.; *(g)* Results—*(a)* When Untreated; *(b)* Under Various Methods of Treatment, Joseph Price, Philadelphia, Pa.

20. Intercurrent Typhoid Fever in Pregnancy, Thomas E. McArdle, Washington, D. C.

21. Notes on a Case of Cholelithiasis, Frederick Blume, Alleghany, Pa.

22. Perineal Operations, Joseph Price, Philadelphia, Pa.

23. Remarks Bearing on the Surgical Treatment of Intussusception in Infants, based on Two Successful cases, Henry Howitt, Guelph, Ont.

24. The Limitations of Surgery in the Treatment of the Uterus and its Appendages, William H. Myers, Fort Wayne, Ind.

25. The Incision in Abdominal Surgery—Methods and Results, J. H. Carstens, Detroit, Mich.

26. Abdominal Section in Ectopic Gestation, where the Fœtus is Living and Viable, X. O. Werder, Pittsburg, Pa.

27. Restoration of Intestinal Continuity without Mechanical Devices, Wm. E. B. Davis, Birmingham, Ala.

28. Hysterectomy for Cancer of the Uterus, E. W. Cushing, Boston, Mass.

29. Chronic Progressive Atrophy of the Vulva (Kraurosis Vulvæ), its Pathology and Radical Treatment, Charles A. L. Reed, Cincinnati, O.

30. The Reason why Patients Recover from Tuberclosis of the Peritoneum after Operation, Robert T. Morris, New York.

31. Report of two cases of Injury of the Ureter following Operation for Cancer of the Uterus, L. H. Laidley, St. Louis, Mo.

32. Vrginal Fixation of the Uterus as a cure for Retro-displacements, Clinton Cushing, San Francisco, Cal.

33. Hydrosalpinx, A. H. Cordier, Kansas City, Mo.

34. *Discussion*—Should Antiseptic Vaginal Douching be made a Routine Practice in the Puerperium? Referees, A. H. Wright, Toronto; Thos. Lothrop, Buffalo; J. Edwin Michael, Baltimore, Md.; A. T. Machell, Toronto.

35. Infectious Diseases during Pregnancy, Dr. A. H. Wright, Toronto.

36. Congenial Diaphragmatic Hernia—Reports of two Cases, H. T. Machell, Toronto.

37. Reports of some Interesting Abdominal Operations, with exhibition of specimens, Rufus B. Hall, Cincinnati, O.

The annual dinner of the association will be held in the Toronto Athletic Club, on Thursday, September 20th, 1894, at 7 p.m. Members of the medical profession desiring to attend the dinner may procure tickets from the committee of arrangements during the forenoon of the first day of the meeting. Covers will be laid for the number signifying their intention to be present up to this time, and the list will then be closed.

American Public Health Association.—The twenty-second annual meeting of the American Public Health Association, will be held at Montreal on September 25th to 28th. The Association was organized in 1872 for the purpose of inaugurating measures for the restriction and prevention of contagious and infectious diseases, and for the diffusion of sanitary knowledge among the people. The growth of the Association and the work it has accomplished more than justify its existence. Its membership has been augmented from year to year until it now constitutes the largest and strongest sanitary body in the world, and embraces in territorial extent the United States, the Dominion of Canada and the Republic of Mexico.

The Local Committee of Arrangements is at work to insure a large and profitable meeting. Railways have reduced their rates to one fare and one third, provided certificates of attendance be produced when leaving Montreal on the return trip. Special blanks will be furnished on demand by ticket agents at all stations, said agents having to give a receipt for the going fare received.

Officers for 1893-'94.—President, Dr. E. P. Lachapelle, Montreal, P. Q.; *1st Vice-President*, Dr. M. Carmona y Valle, Mexico, Mex.; *2nd Vice-President*, Dr. J. N. McCormack, Bowling Green, Ky.; *Secretary*, Dr. Irving A. Watson, Concord, N.H.; *Treasurer*, Dr. Henry D. Holton, Brattleboro', Vt.

Officers of Local Committee of Arrangements for the Montreal Meeting.—Dr. Robert Craik, *Chairman*, Montreal; Dr. Elzear Pelletier, *Secretary*, 76 St. Gabriel Street, Montreal.

For application blanks or further information, apply to the Local Committee of Arrangements.

Early Symptoms of Mental Disease.—*The British Medical Journal* contains the following translation from the *Berl. Klin. Woch.*, May 28th, 1894, in which Wemer draws attention to the importance of early diagnosis from the point of view of treatment. In early melancholia, sleeplessness is marked, though the patient still continues to follow his occupation. A feeling of sadness and depression, with distaste for work, then supervenes. He may appear indolent, and weeps on the least occasion. Sometimes there is unreasoning irritability, followed by depression. The appetite is impaired, and the patient may thus think himself the subject of some hopeless disease. He has præcordial anxiety and then develops diseased ideas, perhaps with hallucinations. The early stage of mania is often one of depression. Sleeplessness, irritability, dislike of work, self-accusation may also be present here. It is very characteristic of mania when the patient suddenly passes into the opposite extreme, the pleasure in life, etc., re-awakening. One may make all kinds of purchases, another write verses, etc. If contradicted he may become incensed or even violent. Acute paranoia develops very rapidly, and is characterized by hallucinations (hallucinatory form), numerous delusions, self-over-estimation, mistrust, unrest, etc. In the chronic form, the symptoms may date from some time back, even from childhood. The child holds itself aloof, is sensitive, obstinate, etc. With years the peculiarities increase, ideas of persecution may occur, and large ideas, with or without hallucinations. To this group belongs the paranoia querulenta often appearing after the loss of a lawsuit. In paralytic dementia the initial symptoms are very varied.

Bodily symptoms mostly prevail, such as pains in the limbs, head pressure, slight difficulty in speech, etc. There is sleeplessness, loss of appetite, constipation. Years may pass, the patient improving a little. Later the mental symptoms become more marked. The patient is abnormally irritable or indifferent. He may become extravagant. The impaired intelligence is obvious. Unequal pupils, speech troubles, facial paresis supervene. For oncoming melancholia or mania, removal to a suitable institution is best, and also for acute paranoia. The percentage of recoveries may thus be increased. Drugs should be given only under constant supervision. For chronic paranoia change of scene, hydrotherapy, etc., should be recommended, and removal to an institution only when the patient is unmanageable, or the home conditions unsatisfactory. An early general paralytic is treated in the same way, but the strictest supervision is required

PIPERAZINE AS A URIC ACID SOLVENT.—Confirmatory evidence *(Med. Summary)* of the utility of piperazine as a solvent for uric acid in the body has recently been afforded by the experiments of Dr. Rosenthal on animals, *Medicine Post.* These experiments consisted in producing deposits of uric acid in the heart, pericardium in the bladder and kidneys, and then administering piperazine in doses of 0.75 gramme by the mouth or subcutaneously. After a period varying from two to seven days, the animals were killed, and in all of those which had been treated with the remedy a complete disappearance of the uratic deposits was observed. On the other hand, the control animals which had been treated with borax, phosphate of sodium and lithia, exhibited considerable collections of uric acid in the different organs. On the ground of these experiments, Rosenthal regards piperazine as the most reliable solvent for uric acid. Albuminuria was never observed. Dr. Blanc, *American Journal of the Medical Sciences,* April, 1874. also states that "theoretically the use of piperazine is very encouraging. An an alkaloid of the pyridine group, it is not poisonous nor irritant. The combination of urate of soda and this drug is nearly nine times more soluble than the urate of lithia. Vogt has found that under fifteen grain daily doses the amount of urates is decreased, while that of urea increases. This goes to show that not only does this drug dissolve urates, but it is an oxidizing agent and modifies tissue change. On the other hand, the nitrogen which is eliminated is not increased, which shows that there is no increase of waste nor supplementary decomposition of albuminoids. Piperazine has been strongly recommended for gout, in that it relieves the pain, frees the engorged joints, and expels renal calculi. Patients who have suffered from nephritic colic, some days after the drug experience a recrudescence of the pain, which is followed by the expulsion of a large calculus which has apparently been diminished in size by the action of the drug. In this respect it appears to act with less danger than do the alkalies, and more rapidly than the flushing out of the kidneys with mineral waters." Piperazine-Bayer is a chemically pure preparation, and is furnished in half-ounce and ounce vials, and also in tubes of ten tablets, each tablet containing sixteen grains, which is an average daily dose.

DEATH FROM HÆMORRHAGE AFTER TOOTH EXTRACTION.—Dr. Elliott Bates, (*Annals of Surgery*) reports an interesting case showing the profound respect with which the surgeon should regard all cases of hæmophilia. The patient was a man aged twenty-five years, who had been delicate from childhood, suffering at intervals from painful joints and digestive troubles. On one occasion in childhood a slight accident resulted in profuse hæmorrhage, and twice he nearly lost his life on account of hæmorrhage after extraction of a tooth. He determined, however, to risk it a third time. Gas was administered and the tooth removed. Hæmorrhage followed, but diminished steadily after the cavity had been packed. It returned, however, during the night, and in the morning the patient was in a state of collapse from loss of blood, the face and lips being pale and cold, while he also had tinnitus aurium and dimmed vision. In spite of treatment by hypodermic injections of whisky, strychnia, and saline solution, the patient continued to lose blood and gradually became weaker, finally succumbing seventy-six hours after the extraction of the tooth. There was no trace of any similar condition to be discovered among the patient's relations. On the maternal side there was a phthisical taint, and on the father's a neurotic tendency.

THE INFLUENCE OF ALCOHOL, GLYCERINE AND OLIVE OIL ON THE ACTION OF DISINFECTANTS.—Lenti summarizes in the *British Medical Journal* the results of a series of researches as follows: (1) Alcohol in the absence of water neutralizes all bactericidal power on the part of sublimate or phenol with regard to anthrax spores, and the bactericidal action is not exercised until the dilution of the alcohol with water becomes greater than two per cent. in the case of 1 in 1000 sublimate solution, or than seventy per cent. in the case of carbolic acid. The length of time to which the spores were subjected to the action of the solutions was twenty-four hours in the case of sublimate, and forty-eight hours in that of phenol. (2) Glycerine has a similar impending action, interfering with the action even of a 2 in 1000 solution of sublimate, if the proportion of water be less than forty per cent. In the case of phenol it is still more manifest. (3) Phenol and lysol dissolved in olive oil have no disinfectant action when tested as above. (4) In the preparation of a disinfecting fluid one ought, therefore, to avoid the addition either of alcohol, glycerine or fats.

AN EPIDEMIC OF PRIAPISM.—The *Boston Medical and Surgical Journal* reports the following unique epidemic: Dr. Meynier, a French army surgeon, has recently published a curious bit of medical experience. A company of troops *en route* having halted for some time at El Hacsiba, the men were nearly all seized with priapism and prolonged and painful erections. Considering that an absence for some time from a garrison town might be the cause, the surgeon ordered light diet and flax-seed tea. The condition, however, became steadily worse. The erections continued throughout the company, and the men began to complain of great lassitude and dryness in the throat. Finally many had marked hæmaturia. Careful investigation disclosed the real cause of the trouble. During their leisure the men had been hunting frogs at a neighboring stream. The poplar and willow trees along the banks were found to be thickly covered with coleoptera of the family of cantharides, *meloe*. Chilled in the early morning, they fell by thousands into the water, where they were gladly and greedily devoured by the frogs—which latter gave similar pleasure to the soldiers. The taste of the flesh was in no way injured, but its effect upon the genito-urinary system of the divers was disastrous. The removal of frogs' legs from the bill of fare put an end to the curious epidemic in a few days.

A SUIT FOR MALPRACTICE IN CINCINNATI.—Dr. C. D. Palmer, of Cincinnati (*Phys. and Surgs.*), has just had a suit for malpractice decided in his favor. In 1888, while performing a perineal operation upon a woman, he broke the needle, and careful search failed to find one of the fragments, either in the tissues or elsewhere. The patient not acting satisfactorily under the anæsthetic, further search was considered unwise, and the operation was concluded. Soon afterward the doctor received injuries in a runaway accident, remaining unconscious, or semi-unconscious, for about a month, and being utterly unable to attend to practice for a year. In the meantime another physician operated on the woman, and found the needle encysted. Suit was brought for $10,000. The jury rendered a verdict for the defendant on the first ballot. Dr. Palmer has been Professor of Gynecology in the Medical College of Ohio for a quarter of a century, and is connected with the Cincinnati and Presbyterian Hospitals.

AN ANTIDOTE TO STRYCHNINE.—M. G. Grigorescu (*Archives de Physiologie, 1894, No. 1, p. 32*), in the course of some experiments to determine the action of toxic substances upon the excitability of peripheral nerves and muscles, developed the fact that butyl-chloral opposes the toxic action of strychnine. He found that if injections of strychnine were made (in frogs), those which received also the butyl-chloral remained torpid, while those with strychnine alone were tetanized; the least noise increased the tetanus of the latter, but the former did not show any spasm. After some hours the butyl-chloral was eliminated, and then these frogs were seized with tetanus, as were the others. On repeating the antidote up to the elimination of the strychnine, complete cures resulted. On experimenting with larger frogs similar results were obtained. The observations demonstrate that butyl-chloral energetically opposes its physiological action to the physiological action of strychnine.

AN IMPERIAL BRITISH PHARMACOPŒIA.—It is

proposed to revise the British Pharmacopœia and with a view to better adapt it to Colonial requirements, medical, chemical, botanical and pharmaceutical friends are invited to send to John Attfield F. R. S., 17 Bloomsbury Square, London, W. C., Eng., any reports of original observations and researches bearing on the pharmacopœia.

It is to be hoped that the glaring inconsistencies in which it abounds will be remedied.

It has been pointed out by Mr. Attfield that great saving might accrue by the use of indigenous substances in the Colonies in the place of the more expensive foreign article, such as, the use of an indigenous oil for olive oil in the preparation of ointments, plasters, liniments, etc.

A MEDICAL MAN FINED FOR CONTEMPT OF COURT.—The inquest on the body of a man named Cooper *(Medical Press)*, a shoemaker, who was shot by a man named Winters, who afterwards committed suicide, in Goldsmith's-row, Hackney-road, was considerably delayed by the action of Dr. O'Regan, who declined to hand over the revolver with which the crime was committed. The inquiry had to be adjourned, and Dr. Regan then produced the weapon. He asked for his fee as a medical witness, but instead was fined £1 by Mr. A. Hodgkinson, the deputy-coroner, for his conduct in the matter. The doctor said that he should appeal against the coroner's decision, and has done so, with the result that he has been informed by the Treasury Commissioners that they decline to remit the fine.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.—The fourth annual meeting of the American Electro-Therapeutic Association will be held in New York, September 25th, 26th and 27th, at the New York Academy of Medicine. Members of the medical profession are cordially invited to attend.

WILLIAM J. HERDMAN, M.D.,
President.

MARGARET A. CLEAVES, M.D.,
Secretary.

COUGHING-TAXIS.—In the *Lancet*, January 27th, Dr. Wherry, University Lecturer on Surgery, Cambridge, declares that he has frequently found that coughing on the part of the patient during taxis was a great aid in reduction of hernia. He cites one instance in which after two physicians, aided by chloroform, had failed to reduce, he succeeded by gentle taxis continued for fifteen minutes while the patient coughed continuously. It was a femoral hernia, severely strangulated, in a middle-aged woman.

ECZEMA OF THE VULVA.—Lusch recommends the following treatment:

R.—Sod. bicarb.,	8.0
Potass. bicarb.,	4.0
Glycerin. pur.,	6.0
Tr. opii.,	8.0
Aq. destill.,	250.0

Sig.—Wash the affected parts night and morning with the above and then powder with:

R.—Amyli.,	98.0
Camph. trit.,	2.0

A NEW METHOD OF PRODUCING THE IODINE REACTION IN AMYLOID TISSUE.—Galeotti (*Lo Sperim.; B. M. J.*) describes a new method of demonstrating the extent of amyloid degeneration. It consists in soaking the sections in a solution of potassium iodide, then rapidly washing them in distilled water, and immersing them in chlorine water. The amyloid tissue alone retains the iodine salt, so that when this latter is attacked by the chlorine water, it is the altered part alone which is stained by the liberated iodine. The test is said to be extremely delicate.

MAGISTRACY, MEDICINE AND MALINGERING.—The special usefulness *(Boston Med. and Surg. Jour.)* of a medical magistrate is reported from England. A workhouse inmate was arraigned before a medical J.P., charged with refusing to work, to which he pleaded that he was a victim of heart disease, whereupon the magistrate promptly descended from the bench, produced a stethoscope, auscultated the culprit, and re-ascending the throne of justice, sent him "up" for seven days for malingering.

A SUCCESSFUL SPLENECTOMY.—Dr. James Murphy, of Sunderland, England, did a splenectomy upon a woman forty-five years old, on April 25th. The operation was undertaken for abscess and hypertrophy. The wound healed promptly, and at last reports the patient was making a satisfactory progress.

SULFONAL.—It should be borne in mind (*Maryland Med. Jour.*) that to obtain a prompt, safe and agreeable effect from sulfonal it should always be given in hot solution cautiously cooled to a drinkable temperature, so as to avoid precipitation. By adopting this plan, not only is a smaller quantity of the drug required, but sleep occurs much more rapidly and is not followed by after-effects.

ELEGANT GLYCERIN JELLY.—The following directions are given in the *Pharmaceutische Zeitung*: Soak two drachms of gelatin in six fluid ounces of rose water, and then liquefy by applying heat. To the somewhat cooled liquid, before solidifying, add five drachms of albumen, again apply heat to coagulate the albumen. In the perfectly clear liquid dissolve 12 grains of salicylic acid, add 5 fluid ounces of glycerin, and strain or filter on a hot-water funnel. Pour into wide-mouthed bottles and allow to solidify.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The *Lancet* states that at the meeting of the Council of the Royal College of Surgeons of England, held recently, Mr. J. Whitaker Hulke, F.R.S., was re-elected President of the College. Mr. Reginald Harrison, and Mr. Alfred Willett were appointed Vice-Presidents.

MARRIED.—On Wednesday, June 27th, 1894, at the residence of the bride's parents, Harwich, Ont., by the Rev. J. Becket, of Thamesville, Dr. P. B. Robertson (Trinity, '91), of Newbury, Ont., to Maggie, only daughter of Alex. Clark, Esq.

A STATUE of the late Dr. J. Marion Sims is shortly to be erected in Byrant Park, New York. The statue is from the chisel of the well-known French sculptor, M. Dubois.

THE use of the metric system of weights and measures has now been made compulsory in the prescription and dispensing of medicines in Russia.

DR. G. S. MOORE, of Glasgow, recently deceased, bequeathed $225,000 to found a convalescent home for nurses.

THE wet nurses in Austria are on a strike.

Books and Pamphlets.

THE MEDICAL PROFESSION OF UPPER CANADA, 1783-1850. An Historical Narrative, with original documents relating to the profession, including some brief biographs, by Wm. Canniff, M.D., M. R. C. S., Eng. Illustrated. Cloth. 1894. Toronto: Wm. Briggs.

This work is divided into three parts. The first part deals with the Pioneer Medical Men, and the several steps taken to establish the profession on a legal basis. The second part includes the proceedings of the Upper Canada Medical Board from its organization in 1819, to 1850; and of the College of Physicians and Surgeons of Upper Canada, 1839-41. The third part contains biographical sketches of early physicians of the Province, with many references to early events in the history of Upper Canada. A number of cuts of the more prominent members of the profession add considerably to the beauty and value of the book. The preservation of the records of the medical fraternity is a most praiseworthy object, and deserves the hearty co-operation of every medical man. The book contains six hundred and eighty-eight pages, which are filled with matter of interest to the medical profession of Ontario. The success which we feel must await the author in this undertaking, and which he truly deserves, will, we trust, repay him amply for the valuable time he has spent in bringing this work to completion.

ANTISEPTIC SURGICAL TECHNIQUE with especial reference to Gynæcological operations, together with Notes on the Technique employed in certain supplementary proceedures. By Hunter Robb, M.D., Associate in Gynæcology, Johns Hopkins University; Professor of Gynæcology, Western Reserve University, Cleveland, Ohio. Illustrated. Philadelphia: J. B. Lippincott Co. 1894. Price $2.

This work contains 250 pages, replete with useful and important information concerning anti- and asepsis in surgical proceedings, both major and minor. While much space is necessarily devoted to the description of appliances and proceedures which one could only hope to command in hospital practice, there is an excellent chapter on "Operations in the country, in private houses, or in places where the technique must necessarily be more or less imperfect."

Doubtless the technique is grand, and the chance of infection reduced to a minimum by strict attention to its details; yet, in the preparation of the operator and his assistants, we cannot agree with Dr. Robb *in toto*. By the continued use of the permaganate of potash and oxalic acid, followed by strong solutions (1 in 500) of bichloride of mercury, as he recommends, one's hands shortly become blackened, roughened, and covered with fissures, which must necessarily greatly increase the difficulties of thorough disinfection.

A SYSTEM OF GENITO-URINARY DISEASE, SYPHILOLOGY AND DERMATOLOGY. By various authors. Edited by Prince A. Morrow, A.M., M.D., Clinical Professor of Genito-Urinary Diseases, formerly lecturer on Dermatology in the University of the City of New York, Surgeon to Charity Hospital, etc. With illustrations. In three volumes. Volume III, Dermatology. New York: D. Appleton & Co. 1894.

This volume of nearly one thousand pages has been contributed to by twenty-seven of the most prominent dermatologists in Canada and the United States. Whether that is an advantage or not is a matter of opinion, many preferring a work written entirely by one man. However that may be, this book must commend itself to all, as it is well written and arranged, exhaustive, and in every respect up to date.

The classification of diseases of the skin has, owing to advances made in microscopy and bacterology during the last few years, of necessity changed considerably. Some forty new diseases have been added, which, a few years ago, were either confounded with others or entirely unrecognized. This has necessitated the introduction of many new terms in order that pathological conditions may be more clearly explained.

This book contains what is most essential in a treatise on dermatology, viz.: good plates and photo-engravings. There are eleven photographs in colors or chromo-lithographs, sixteen half-tone plates, and one hundred and four figures, mostly photographs of pathological changes in diseased tissues. These have all been most beautifully and perfectly executed, and are life-like representations of what they are intended to illustrate.

AN OPERATING TABLE. By Hunter Robb, M.D. From the John Hopkins Hospital Bulletin, No. 41, June, July, 1894.

THE JOHNS HOPKINS' HOSPITAL REPORTS. Vol. IV., Nos. 4 and 5. Report in Neurology II. I. Dementia Paralytica in the Negro Race. II. Studies in the Histology of the Liver. III. Intrinsic Pulmonary Nerves in Mammalia. IV. Intrinsic Nerve Supply of the Cardiac Ventricles in Certain Vertebrates. V. Intrinsic Nerves of the Sub-maxillary Gland of the *Mus Musculus*. VI. Intrinsic Nerves of the Thyroid Gland of the Dog. VII. The Nerve Elements of the Pituitary Gland. By Henry J. Beekley, M.D.

THE SCHIMMEL NON-REPEATING PRESCRIPTION BLANK. H. J. Milburn & Co., Detroit, Agents.

This is a very novel and doubtless very useful form of perscription blank, arranged so that the patient cannot have a mixture refilled without first reporting to his physician and receiving his order.

MACROBIOTIC; OR, OUR DISEASES AND OUR REMEDIES. For Practical Physicians and People of Culture. By Julius Hensel, Physiological Chemist. Translated by Professor Louis H. Tafel, of Urbana University, Ohio. From the second revised German edition. Philadelphia: Boericke & Tafel. 1894. Pp. 6-7 to 201.

MYOMA UTERI AND ITS TREATMENT. By Andrew F. Currier, M.D., New York. Re-printed from *American Journal of Obstetrics*. Vol. xxix No. 1. 1894. Wm. Wood & Co.

THE INTRA-UTERINE TAMPON. By Andrew F. Currier, M.D., New York. Re-printed from *Annals of Gynæcology and Pediatry*. October, 1893.

NINETEENTH ANNUAL REPORT of the Secretary of the State Board of Health of the State of Michigan, for the year ending June 30th, 1891. Robert Smith & Co., State Printers.

ABSTRACT OF PROCEEDINGS of the Michigan State Board of Health Quarterly Meeting, July 13, 1894.

UTERNE PATHOLOGY. By E. H. Pratt, M.D., Chicago. Reprinted from the *Journal of Orificial Surgery*, June, 1894.

PROCEEDINGS AND ADDRESSES of the Sanitary Convention, held at Menominee, Michigan, April 5th and 6th, 1894.

ASEPSIS IN MINOR PROCEEDURES. By Hunter Robb, M.D. Reprinted from *Maryland Medical Journal*, May 19, 1894.

THE CANADA LANCET.

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

Original Communications.

THE STUDY OF ANATOMY.*

BY D. J. GIBB WISHART, B.A., (TOR.), M.D.C.M., L.R.C.P., ENG.

Demonstrator of Anatomy, Trinity Medical College, Toronto; Professor of Ophthalmology, etc., Woman's Medical College, Toronto; Otologist and Laryngologist to the Hospital for Sick Children, Girls' Home, Toronto, etc.

In its association with Physiology and Pathology, Anatomy ranks probably as the most fundamental of those sciences which lie at the foundation of a scientific medical training. Without anatomy, physiological investigations would lack the necessary precision. Without anatomical knowledge, the surgeon who attempts any operation on the human body is no better than a quack or an adventurer. Without anatomical knowledge, the physician would be helpless in the diagnosis of disease.

The study of anatomy is, therefore, of great importance. This has long been acknowledged, and enlightened public opinion has aided in the good work by enabling the student to obtain the material for his investigations, while year by year facilities for study in the shape of accurate casts, models, sections, etc., are being produced, all of which combine to make the study of anatomy much easier and more satisfactory than our predecessors ever dreamed could be the case.

This is as it should be. A substantial foundadation of sound anatomy is needful to the production of the polished, erudite physician, or skilful surgeon.

The subject of the study of anatomy may be looked at from two standpoints—that of the student, and that of the teacher—which I propose to do briefly in order:

* Part of an address delivered at the opening of the 45th session of Trinity Medical College, Toronto, 1st Oct., 1894.

THE STUDY OF ANATOMY FROM THE STANDPOINT OF THE STUDENT.

Vicary, our earliest English anatomical writer, in speaking of anatomy said, "The chirurgeon must knowe the anatomie, for all authors write against those surgions that worke in man's body not knowing the anatomie; for they be likened to a blind man that cutteth in a vine tree, for he taketh away more or less than he ought to doo. And here note well the saying of Galer, the prince of philosophers, in his Estories, that it is as possible for a surgion not knowing the anatomie to work in man's body without error, as it is for a blind man to carve an image and make it perfyt."

For your guidance in study, I would venture to lay down the following propositions:

Book-ism must be avoided. As one of the foremost teachers of anatomy in England at the present day—Thos. Cooke—has lately said, "Book-ism is the fatal error of the day." I would emphasize what I have mentioned before, that the only way for you to learn anatomy is by actual dissection—practical investigation of the nerves, arteries, and muscles; practical inspection of the structures in all their relations as they join together to form the shapely limbs, or well developed body.

Do not imagine that to know *Gray* off by heart is to know anatomy. No lecturer, no text-book, can compete with the actual subject as a source of information. The knowledge which you gain by careful and laboriously painstaking investigation with your scalpel and forceps, is the only knowledge in anatomy which is worth gaining.

It is not the pilot who can recite an accurate description of the rapids that we would employ to steer us down the fierce current at Lachine, but the one whose knowledge of the hidden rocks and shoals has been gained by actual experience, and the physician's anatomical knowledge to be of use must similarly be practical in every sense of the work. Use your text-book then, be it Gray or Cunningham, as a *guide* only, and depend for your knowledge solely on what you learn from the body itself.

Your knowledge must be accurate.—This is of fundamental importance, whatever be the amount of knowledge you possess. Your study of anatomy

is intended to enable you, without hesitation, to place your finger on, or run a needle into, any structure of the body. The skin, which to others is opaque, must to you be transparent, and offer no obstruction to your mental picture of the parts in all their relations lying below.

The final student examining a patient's chest, has made poor use of his dissecting room privileges if his knowledge there gained does not enable him instantly to picture to himself the relations of the lungs, heart, nerves and vessels lying below the chest walls, and thereby to note any sign of a variation from the normal.

James McCartney, in St. Bartholomew's Hospital, London, used to illustrate the value of this accuracy of knowledge by cutting down upon and tying the femoral artery while standing blindfold, or with his back to the patient.

To enable you to obtain this accuracy of knowledge, you must dissect carefully, methodically, and personally, every part. I would suggest that the dissection of to-morrow be read over to-night, and that then to-morrow, dissector in hand, you carefully verify what you have already read—thus stamping it upon your brain.

Three methods of study must be pursued.—Anatomy will be presented to you in various forms. From your lectures and your text-books you will derive a knowledge of the various structures taken in their continuity, the nerves from their origin in the brain and spinal cord to their ultimate distribution in the body and extremities; the muscles from their origins to their attachments, and so forth.

From your dissector, and the bodies on the dissecting table, you will derive a knowledge of the nerves and muscles, vessels and glands as they lie in relationship to each other in the various stages of the dissection, the consideration of every component part being pursued together.

Lastly, from the study of frozen sections, prepared sections, and casts, you will derive a knowledge of the relation of undisturbed parts, which is the essence of surgical anatomy. When cavities like the thorax and abdomen are opened, the various viscera are displaced, and no anatomist can replace them as they were before. We must then use the sections for the purposes of comparison with our dissections.

In a recently published article by Professor McAlister, of Cambridge, that eminent anatomist says, "these sections are not mere superfluities, they are necessary parts of the teaching apparatus in any properly equipped school, for we see the parts in the anatomy room not as they were, but as our disturbance has made them. Take for example the flattened liver as you see it on the table, and compare it with the liver of the frozen body. The former presents a form which the organ could not possibly assume in its normal position when pressed upon—fascetted and moulded by the surrounding viscera and muscles. Take also the pancreas; you know it as shown in sections, or in the model, to be quite a different thing from the long, tongue-shaped gland formerly figured in text-books. But the liver and the pancreas of the model are the organs as they exist in the condition with which the physician has to deal, and it is in these forms that these organs must be known if we are to use to advantage our anatomical knowledge for clinical purposes. Dissection is the only way of learning structure and details, sectional study is the only way of learning relations."

All three modes of study are absolutely necessary to a comprehension of the subject, but do not expect any one of them to fill the place of the whole. Each has its value, and all must be used. The student who wisely avails himself of all these will lay the only foundation that should be laid, in his study of the body which he proposes to treat in disease.

ANATOMY FROM THE STANDPOINT OF THE LECTURER.

This is a transition period in the study of medicine. Discussions are taking place daily on the pros and cons of the advisability of raising the standard of matriculation. On the one hand the possession of a B.A. degree is held to be the qualification which should preface the entrance on a medical course. On the other hand, ideas are being advanced in favor of including such subjects as biology, comparative anatomy, and morphology, in the matriculation examination for medicine.

The length of the course has been increased by the Medical Council of Great Britain, and by our own licensing body in Ontario, while the univer-

sities are following suit by lengthening the sessions from six to nine months.

The relative value of didactic, as opposed to clinical, teaching, is another subject which is attracting the attention of teachers, with a decided, and, I think, a right tendency in favor of devoting a larger proportion of the time to the latter.

Again, the sub-divisions of medicine and surgery have increased so rapidly during the last quarter of a century that some re-arrangement of the course of study must take place, or the student will be overwhelmed by the task before him, if a fair knowledge of all is to be expected or attained.

When so many questions of great importance are pressing upon us for solution, it would be a matter of surprise if the teaching of anatomy presented no knotty problems, especially when we consider the immense amount of original work that is being done in this department alone. During the year 1892, it is estimated that the "literature of new works in human anatomy amounted to more than 2,000 octavo pages."

The science of anatomy is not standing still; it has not reached its limits, neither is it possible to fix any limits to the field it occupies. The text-books on the nervous system, of even five years ago, are practically obsolete—the advance in our knowledge of this system has been so great. Morphology is one of the departments which has of late received special attention at the hands of anatomists, and through it we are receiving new light upon many of the most intricate problems in the causation of disease, especially along the line of development and heredity. The presence of sarcoma, the cells of which have no analogy with any adult tissues, but represent an embryonic form not normally found in the adult body, will probably find its explanation at the hands of the morphologist. Biology, zoology, and comparative anatomy have each their recognized place in this good work. Every teacher of anatomy must make himself more or less conversant with all these subjects, if he would teach to profit. While, however, this is true, he must be wise in his choice of mental *food* for his students; and where there is so much, the choice is difficult, and this difficulty has led to a wide divergence of theory and of practice on the part of teachers of anatomy.

We find Professor Allen, of Pennsylvania University, expressing himself on this subject before the Association of American Anatomists this year, as follows: "In most institutions, I regret to say, the standard of anatomical teaching is practical in character, and not the one which is most useful as a discipline of the mind." And again, "I cannot refrain from an expression of regret that . . . . the demands of the surgeon still dominate the lecture hall."

He would advocate the study and teaching of anatomy from the purely scientific standpoint of view, when he says, "the acquisition of knowledge for its own sake—the determination of general principles that reveal the existence of law—awakens and maintains pleasures and interests in the mind of the anatomist, compared with which the practical use that he can make of the knowledge appears to be poor and mean."

On the other hand, Mr. Kent, Prof. of Anatomy in Glasgow, in an address delivered last October at the opening of St. Mungo's College, bemoans this very tendency on the part of anatomical teaching, and advocates a modification in the teaching and examinations so as to make anatomy the Institutes of Surgery, in the same manner as physiology is the Institutes of Medicine. Thomas Cooke, the well known anatomist of London, in a letter to the *London Lancet* of September 1st, 1894, fiercely attacks the present methods of teaching and examining in anatomy in Great Britain, pointing out that under these the student becomes a *scientist* but not a *practitioner*, and that gentlemen thus turned out are not to be safely trusted with the lives of their patients.

I have no wish to undervalue in the very slightest degree morphology, biology, zoology, or the scientific aspect of anatomy, but *they must be kept out of the curriculum of medicine*, or at any rate in the background. The teacher should utilize the rays shed by these studies to illuminate his explanations, to elucidate the apparently unreasonable presence of certain structures, to explain the causes of variations from the usual form, and in many other ways. But the student's attention must not be diverted into these side lines from his one aim and object—to be a physician. "There are possibilities of anatomy which are the impossibilities in the medical course," and this should be pointed out, so that the horizon of the student

may become enlarged and an impulse given to post-graduate study along these lines.

Professor Dwight, of Harvard, in speaking of this, says: "As a practitioner myself of twenty-five years standing, I am appalled at the amount of knowledge of all kinds which is now necessary for the simplest practice of the profession by any one who would not fall behind his colleagues. I heartily agree with Huxley's saying 'that whoever adds one tittle that is unnecessary to medical education is guilty of a very grave offence."

Wherever a department of the medical course is in charge of a professor whose whole time is devoted to his professorship, there is an ever present danger that he will become a man of one idea, absorbed in his one department, to the exclusion of others, failing to keep the subject which he teaches within the bounds which it must occupy, if fair play and no favor, to all the departments for medical training, is to be the rule. You can magnify a part till it appears larger than the whole of which it forms a part. I am afraid some of our teachers of biology, and the other departments which I have named, always apply the magnifying glass to the eye with which they behold their own departments, else we would not have the relatively undue attention paid to these subjects which we find even in this fair city.

Apart from the fact, which is acknowledged on all hands, that the student's time is already overcrowded with work which is absolutely needful, there is also the danger of misdirecting the student's energy, which should be devoted to medicine, along side-lines, scientific though they be.

Permit me the following quotations to illustrate my meaning. One writer expresses himself thus: "In many medical schools of the present day young men are set down to spend three or four valuable months of the year in the study of zoology and comparative anatomy. . . . If I had power in this matter, I should cut all these subjects out ruthlessly. . . . When the time which a man possesses to become familiar with the structure of the human body is so limited, what earthly business has he to be studying the anatomy of star fishes and crabs and lobsters?" The speaker is no less a man than Huxley.

One of the oldest, as well as the wittiest, of our American teachers of anatomy, whose name is everywhere received with honor, illustrates my second point as follows:

"Is not the question, why our young men and women so often break down, and how they may be kept from breaking down, far more important for physicians to settle than whether there is one cranial vertebra, or four, or none? But I have a taste for the homologies. I want to go deeply into the subject of embryology—I want to analyze the protonihilates precipitated from pigeons' milk by the action of the lunar-spectrum! Shall I not follow my star? Shall I not obey my instincts? Shall I not give myself to the lofty pursuit of science for its own sake? Certainly. You may if you like; but take down your sign, or never put it up. That is the way Dr. Owen, Dr. Huxley, Dr. Agassiz, Dr. Wyman, Dr. Gray, and Dr. Chas. T. Jackson settled the difficulty. We all admire the achievements of this band of distinguished doctors who do not practice. But we say of these writers of all pure science, as the French officer said of the charge of the Six Hundred at Balaclava: *C'est magnifique, mais ce n'est pas la guerre*—it is very splendid, but it is not practising the doctor's business." Thus says Oliver Wendel Holmes.

If then I acknowledge the use in medicine of such subjects as morphology and biology, or advocate their study, and yet would banish them from the medical course, where, you ask, would I have them studied? *By preference, in a post-graduate course.* It has been argued by some sound teachers, that they logically precede the medical course. This is not proven, and if it were, the wisdom of directing thus forcibly the attention of High School students to the study of medicine is very questionable, even if their teachers were qualified to teach the subjects themselves. There are sound arguments in favor of post-graduate study, however. Firstly, our Council calls for a fifth year, to be spent in a laboratory for physiological and pathological research. Secondly, our Provincial Government has expressed itself by word and act as anxious to advance the science of medicine even to the extent of voting money for the purpose.

Let these two be brought to bear on one another, and instead of compelling our students to go abroad to Johns Hopkins University, or the German laboratories, for their fifth year, *let*

the Government equip and endow a laboratory where our students can pursue post-graduate study.

If the Biological Department of our Provincial University were used for this purpose, it would indeed advance science to our mutual good, instead of acting as an "apple of discord."

NEUROTIC COMPLICATIONS IN LA GRIPPE.*

BY STEPHEN LETT, M.D., M.C.P.S. ONT.

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Of the various diseases met with during the past decade, there is perhaps none in which neurotic complications have been more frequent than in that form of epidemic influenza which has swept over our land for several successive years, known as "La Grippe." Why such complications should exist to so great an extent in connection with this disease, is somewhat difficult to understand. We all know that the malady has a peculiar aptitude for searching out any weak organ or system of organs, and making its virulence and power felt upon such weakness; we also know that this is a very neurotic period, that people live at too high a rate of nerve pressure, that they wear out or exhaust their nervous systems prematurely, that they hand to posterity a much more unstable nervous organization than did their ancestors who lived by the light of other days, who did one day's work in a day and went to bed at early candle light, who worked during the day and rested both body and mind at night. These things being considered, it is but the sequence of events that many neurotic complications should accompany and follow so potent a cause as la grippe. Another very tenable explanation would seem to be, that the toxic element in the circulation, upon which the influenza of necessity depends, has a special affinity for the nervous system. This theory would seem to be sustained when we note the excessive amount of irritation set up in the nerves, producing many forms of neuralgia and various inflammations, in some cases not stopping short of symmetrical multiple neuritis, a condition held by some to be conclusive of a toxic cause. Perhaps the truth may rest in a combination of these factors.

The neurotic manifestations of la grippe may best be considered as those occurring during the febrile stage, and those which may be classed as post-febrile or sequelæ. Early in the disease, nervous symptoms occur and may be so pronounced as to give the malady a distinctive character or neurotic type. Such symptoms would include a severe initial chill, followed by intense headache and neuralgia, pains in the course of sets of nerves, especially the fifth pair, down the spine—particularly noted in the lumbar region; also many painful neuralgic sensations, hyperæsthesia of the organs of special sense, obstinate insomnia which may be the forerunner of a transitory psychosis, associated with delusions or hallucinations of exaltation or depression, and which may be followed by a pronounced meningitis leading to permanent mental impairment or ending in coma or death. Many of the above symptoms are of course present in a more or less marked degree in the ordinary fevers and exanthems, but in epidemic influenza they are more pronounced and would seem to possess a distinctive character.

With regard to the nervous sequelæ of la grippe, two important factors should be borne in mind. First: Their severity bears no relative proportion to the severity of the primary disorder. Second: The most serious nerve disorders may follow a second or third attack of influenza, although those successive attacks may each be milder than the preceding one.

Amongst the nervous complications to be noted after the subsidence of the fever, may be mentioned the following motor disturbances: well-marked paresis of the facial and ocular muscles, and of the organs of speech; paralysis of one or more of the extremities as a result of degenerative neuritis, or, as has been recorded, severe organic changes in the central nervous system. Sensory disturbances are also present in some cases, such as hyperæsthesia and anæsthesia, either localized or extending to a more or less extensive area, and I have no doubt that many cases of partial deafness and "grip ear" depend upon an interference with the harmonious working of the auditory nerve. It is also common in the after stages of

* Read before the Ontario Med. Association, June, 1894.

influenza to note an intense nervous prostration, making convalescence slow, tedious and discouraging.

In addition to the above post-febrile nervous disturbances, we meet with true psychoses of a marked asthenic character, which would appear to be the result of a toxic element, and have been classed by some authorities amongst the "Toxic Insanities." They present the following types: Acute mental exhaustion with confusion of ideas, stupor, or, perhaps, hallucinations or delusions, accompanied by great physical prostration; also, occasionally intolerance of light and sound. The majority of this class make a good recovery in a few weeks or months. Sometimes, however, a case will run into a chronic condition and become permanently mentally weakened.

Melancholia claims by far the greatest proportion of the post-influenzal insanities; fully one-half. This psychosis is usually present without marked delusion, but it is accompanied by all degrees of mental depression, with loss of interest in their daily avocation or home surroundings; forebodings of evil or impending calamity, bemoaning their pitiable condition, and frequently developing suicidal tendencies, which occasionally culminate in the successful accomplishment of the rash act, as a late report testifies with regard to both a husband and his wife. Some of these cases are extremely sensitive to light and sound, are easily agitated, and suffer more or less from insomnia; in fact the insomnia so frequently present in the convalescing stages of the influenza appears to be the starting point of this morbid depression, When suicide does not take place, and the family history is good, the prognosis is favorable.

Mania is the least frequent of the mental sequelæ of epidemic influenza, contributing only about 18% of the whole. The recorded cases point to an absence of delusion or hallucination, or even very severe maniacal excitement, the insanity is more of an asthenic type which, with sustaining treatment and a good family history, presents a favorable prognosis.

In addition to these principal types of insanity, we may have paranoia and post febrile hysteria. In such cases, however, a predisposing cause will usually be found, the influenza merely playing the part of the match that started the fire in the already arranged kindling.

In all forms of mental and nervous maladies resulting from influenza, where there has not been some previous mental trouble or hereditary predisposition, the prognosis is usually favorable, though recovery may be slow; where these factors exist the contrary obtains.

HYDRONEPHROSIS OF ONE KIDNEY AND ATROPHY OF THE OTHER: A CASE.

BY ALEXANDER M'PHEDRAN, M.B.,

Associate Prof. of Medicine, University of Toronto, etc.

Wm. P., aged 33, a large well-built man, of steady habits, good family and personal history. Has been a postman for last three years; previous to that he worked on the Grand Trunk Railway. Has been very healthy until last October (1893), when he began to ail. He was confined to the house for three days at Christmas on account of a cold caused by getting wet. He resumed work though not well, and continued at it until Feb. 3rd last, when he consulted Dr. Allen Baines for failing sight and vomiting. He was ordered to bed. The face was slightly puffed; some pain in the lumbar region, and dull feeling in the body. Urine rather scanty, high-colored for a few days, afterwards pale. Thirst marked.

At Dr. Baines' request he was admitted to the Toronto General Hospital under my care, Feb. 13th. There was then excessive thirst, good appetite, normal temperature, pulse 80, hard and regular, arterial walls considerably thickened; apex impulse of heart nearly an inch to left of nipple line, diffuse and forcible. Slight mitral and aortic systolic murmurs. The aortic second sound accentuated. The face was markedly œdematous, the body generally, slightly so. The stomach was slightly dilated; the contents removed by a stomach tube an hour after a test breakfast showed a normal amount of free hydrochloric acid present.

Urine, pale yellow; quantity in 24 hours, 28 oz.; alkaline, with deposit of phosphates, no pus or casts. Albumin abundant; no sugar or bile; urea ½ per. cent.; sp. gr. 1010. The blood con-

tained 3,200,000 corpuscles per cmm. No hæmorrhages.

The treatment advised consisted in the administration of magnes. sulphas to act freely on the bowels, and liquor nitroglycerin sufficient to lower the pulse tension; and dry cup, followed by hot fomentations applied to the lumbar region.

15th. Had a convulsion. Œdema much increased. No change in urine. Pilocarpine gr. $\frac{1}{10}$ subcutaneously produced free perspiration in ten minutes. Chloral hydrate was given to soothe the restlessness.

18th. Delirium, sometimes excited, during the night. Very restless, twitching of hands. Urine and fæces passed involuntarily. Died next day.

An autopsy was not permitted, but the kidneys were obtained. One was atrophied, the remains consisted of cicatricial tissue studded all over the surface with small cysts, and forming a small mass less than two inches in length. The ureter was very small and impervious.

The other kidney was the seat of marked hydronephrosis. The renal tissue was reduced to a thin layer in some places, and wholly absent in others. Not more than about one-third of the secreting tissue remained. The tubules in this tissue were widely separated by pressure, but there were no evidences of inflammation. The ureter was very slightly dilated in its upper three or four inches, all that could be obtained of it. It is to be regretted that the ureters could not have been examined fully; but a *post mortem* not being permitted, the kidneys had to be removed through small openings in the lumbar region.

The condition of the atrophic kidney was probably congenital; it does not seem possible that it ever possessed active secreting structure. The small cysts on the surface, doubtless, resulted from dilatation of imperfectly developed tubules. Bristowe* points out that a hydronephrotic kidney may undergo quite as great atrophy as occurred in this kidney. But there were no lobulations to indicate that this one, like its fellow, was hydronephrotic.

A case is reported by Czerny† similar to the one here described. In his case the urine was normal. The hydronephrotic kidney was removed, complete anuria followed, and on *post mortem* examination the opposite kidney was found atrophied and useless. This is the only case of the kind I have found recorded. In my case, as in Czerny's, the urine was doubtless normal until the autumn of 1893, when his health began to fail, a few months before his death. Some considerable time before his last illness, Dr. Baines had examined the urine and found it quite normal. The case illustrates to what a remarkable degree the amount of renal structure may be diminished without causing any alteration in the quantity or quality of the secretion. It is well known that large portions of the kidneys may be removed in lower animals with little if any effect on the urine.

* Theory and Practice of Medicine, 7th ed., page 378.

† Fagge's Principles and Practice of Medicine, 2nd ed., Vol. II, page 674.

Selected Articles.

TREATMENT OF PERITONITIS.

In considering the treatment of any grave affection, it is well to recollect that certain of the so-called symptoms of a disease are not gross evidences of a disturbing evil within the body, but are rather the natural expression on the part of the organism to rid itself of a trouble. Many symptoms are, in fact, curative acts, and are the measures of a natural treatment and not the mere purposeless signs of an unnatural disturbance.

In peritonitis, the exhaustion, the rigidity of the belly-wall, the pain, the vomiting, and the not infrequent sense that the bowel needs to be emptied of flatus, would suggest the recommendation of absolute rest, of attempts to relieve pain, of starvation, and under certain circumstances, of means to relieve the intestine. If, in contemplating a patient with peritonitis, one could regard his more conspicuous symptoms as natural attempts to afford relief, they would appear to be in the direction of securing quiet within the enclosure of the abdomen, and of effecting an evacuation of the alimentary canal.

In the account which follows of the treatment of peritonitis, this suggestion from the therapeutics of nature is not disregarded.

1. *Rest.*—Absolute rest in the recumbent position appears to be the first obvious indication. The knees may be flexed over a pillow to lessen the tension on the abdominal walls and to favor the patient's instinct to assume that posture. The upper part of the chest and the ever-restless upper limbs should be protected by a woollen jacket, and no reasonable restraint offered to the patient's inclination to hold the hands above the

head. This favorite posture, by acting upon the lower parts of the thoraic wall, assists also in diminishing the tension within the abdomen. It is cruel to insist that the hands should be kept beneath the bedclothes. The state of misery in peritonitis is acute enough without being increased by purposeless and rigid formulæ. Cold hands do not cause death, but as on exposure they tend to become cold, they should be covered up. The wretchedness of restlessness has a natural relief in little movements.

2. *Feeding.*—The old rule of eighty years ago of giving as little food as possible by the mouth cannot be improved upon. The stomach is not in a condition to receive nourishment, and what is taken usually remains unutilized and is returned unchanged. The practice sometimes met with of laboriously plying the patient with teaspoonfuls of this or that meat extract, recalls the legend of the Daaides, who spent their energies in pouring water into pitchers without bottoms.

In the matter of feeding there are two extremes to be avoided. The first is the rigid, unreasoning, and often needlessly cruel prohibition of any kind of food by the mouth; and the second is the reckless or intemperate use of ice or iced fluids,

Thirst is often a most terrible symptom in peritonitis. It is not always quite relieved—at first, at least—by rectal injections. The patient is ready to give his life for a drop of cold water. If he takes it, he is sick, but he is much relieved. This little indulgence does not introduce anew the symptoms of vomiting. It is there but it is latent, and the drop of cold water only makes it evident. The patient will not die of vomiting, and simply because a rigid exclusion of all fluid by the mouth does not render the symptom apparent, it does not render it non-existing. The man would sooner vomit than endure this thirst. Very often great relief is given by allowing a fairly copious draught of fluid, which is soon rejected, and which—as it were, by washing out the stomach—leaves the patient for a while infinitely comforted. On the other hand, the perpetual sucking of ice is as bad as the perpetual teaspoonful of useless jelly of decomposible meat-juice. The filling of the stomach with iced water does undoubtedly add to the general depression of the patient, especially when vomiting has been brought into abeyance by morphine.

The right course appears to lie between these two extremes. There should be no rigid formula except this: let the patient take as little food as possible by the mouth. If there be a raging thirst, let him have a little ice,—and very little suffices, or a little iced milk and soda-water; or if, as is common, the inclination lies to something warm, let him take a few teaspoonfuls of hot water or of weak tea made hot, or of beef-tea at a like temperature. It is not the nourishment that is needed, but some fluid in the stomach.

It is better, within reasonable limits, to be guided by the patient's own instincts than by a blind formula founded upon a doubtful physiology.

3. *Opium.* — Here, again, the old practice appears to be the best. Give as little opium as possible. In the early stages of acute peritonitis, and especially in the perforative forms and in those depending upon appendix troubles, morphine, in the form of a hypodermic, is absolutely necessary. In the worst instances, it may certainly avert death from shock. Under its influence the patient revives and the more intense symptoms become greatly modified. Morphine should never become a feature in the routine care of peritonitis: it masks the symptoms, hinders the natural process of cure, and hampers treatment. The indication for it is actual pain, and not mere restlessness and misery. In the really septic forms but very little morphine is called for, and often none at all. Its evil effect in the after-treatment of cases of abdominal section has been amply demonstrated. In quite hopeless cases there can be no objection to its freer employment, but in other instances the administration and the dose of the drug must be sanctioned and measured by the one symptom,—pain.

4. *Aperients.*—At the commencement of the century the use of aperients was a necessary element in the routine treatment of peritonitis. By aperient treatment may be understood the obtaining of an action of the bowels by either drugs or enemata. After a certain number of years the practice altered, and the dictum went forth that when any signs of peritonitis were present, aperients were to be absolutely forbidden.

Within the last few years the more ancient method has been revived, but it has been revived with very radical modifications. To Mr. Lawson Tait the profession is indebted for this return to an almost forgotten practice, and above all, for the employment of that practice with the new element of discrimination. Mr. Tait's measure has been frequently spoken of as "the treatment of peritonitis by aperients," and it has been assumed by some—and probably with disaster—that a purgative is necessary in every case of peritoneal inflammation. Mr. Tait's precise words on this precise subject are as follows: "I have never said that the purgative treatment will cure peritonitis, for peritonitis, once it is completely established, is a practically incurable disease and almost uniformly fatal."

It is on this very point that the centre of the position with regard to this treatment turns. Aperients can never be adopted in the routine treatment of peritonitis. In the larger proportion of cases this measure is entirely useless, and

in the great series of the septic forms it is more or less impracticable.

It is a fact that the most successful treatment of acute obstruction of a certain grade is that which provides for a thorough evacuation of the loaded gut. A blindly-executed enterostomy, with an utter ignoring of the cause of the obstruction, has been attended by better results than have operations in which the agent of the obstruction has been discovered after elaborate search and has been satisfactorily dealt with. This treatment of acute obstruction by the evacuation of the bowel before all things we owe to Benjamin Travers, the father of intestinal surgery.

In cases of strangulation of a certain degree he insisted that the bowel should be cut into and emptied, even after the obstructing band has been removed. He considered that the operation was not complete until this had been done. He urged that safety was only to be obtained by an evacuation of the gut, and he supported his views by numerous cases and experiments.

Another illustration of these self-same points is afforded by perityphlitis. In a previous section of these lectures it was shown that those cases of perityphlitis in which there is diarrhœa, or in which the bowels act naturally or under the influence of aperients, are attended with a much lower mortality than are the cases in which constipation is marked. The writer is convinced from his experience of the value of the aperient treatment in the earliest stages of these cases, and of the pursuit of the same measure in selected instances. In some cases, however, nothing within reason will bring about an action of the bowels. When once general peritonitis has established itself, an aperient is without avail.

5. *Blood-letting.*—This measure of treatment may with advantage be more extensively employed. It is no longer likely to be used in the unreasoning and mechanical fashion of bygone days. In robust forms of localized peritonitis, blood-letting is attended with admirable results. In perityphlitis the application of half a dozen leeches often acts with magical effect. In the older accounts of the treatment of peritonitis by bleeding, no good appears to have followed in cases in which the inflammation was diffused, except, perhaps, in some examples due to injury. On theoretical grounds this is precisely what would be expected.

6. *Operative Measures.*—These are represented by incision and drainage, with or without irrigation. This treatment must be considered, as it applies to peritonitis, under two entirely different aspects. In one series of cases there is vigorous, well-defined inflammation, the local symptoms are marked, pus is produced and may be considerable in amount, and the exudation is more or less clearly localized. In the other series of cases the peritonitis is diffused, the constitutional symptoms are more prominent than the local ones, the changes in the serous membrane—so far as evidence of inflammation is concerned—are comparatively slight, and are out of proportion to the general disturbance.

In the first series of cases surgical interference by incision and drainage ranks with the procedure of evacuating a large abscess.

In the second series the cut into the abdomen and the subsequent flushing out or drainage are to be compared with the washing out of the stomach after an active poison has been swallowed.

The operative treatment of suppurative peritonitis, especially when the effusion is localized, has been remarkably successful. Records of the operation extend back into the eighteenth century, and all that modern surgery can lay claim to is the application of the treatment with greater boldness, with greater frequency, and with infinitely less delay.

The operative treatment of general diffused non-tuberculous peritonitis has so far no record to boast of and little progress to chronicle. It is doubtful whether a single human life has been saved by surgical interference in a genuine case of peritoneal toxæmia. Surgical treatment has been most discouraging in acute peritonitis following upon gangrenous hernia, upon operation, and upon puerperal infection. It has met with but little better results in cases of perforation in which the serous inflammation has been well established.

As to the actual mode of operating adapted for the different varieties of peritonitis, attention should be drawn to the following points. In all cases it is to be assumed that the skin over the operation area is cleansed and prepared in a suitable way, and that the surgeon adopts those measures which students in their examination papers are so fond of describing as "striot antiseptic precautions."

In cases of localized purulent peritonitis an incision should be made into the collection by the most direct route. When the pus has escaped, a rubber drainage-tube of suitable size with stiff fenestrated walls should be passed to the bottom of the cavity. A dressing of some absorbent material, such as Tillmann's papers, sal alembroth, or cyanide gauze, is then applied. No advantage follows fuller evacuation of the pus by squeezing or the immediate irrigation of the cavity, and distinct harm may be done by scraping the wall of the inclosure, by persistent searching for a diseased appendix or other cause of the trouble, and by stuffing the exposed space with a considerable quantity of gauze.

At the end of twenty-four or thirty-six hours the irrigation of the cavity may be commenced and continued twice daily, and now and then a little iodoform emulsion may be introduced.

In some examples of perityphlitis a well-encapsulated collection of pus is not exposed, but the knife enters into an ill-defined district containing a variable quantity of thin, greenish, and often offensive matter, which appears to saturate the tissues. In such circumstances a drain composed of strips of iodoform gauze, which are carefully introduced into the lowest accessible recesses of the region, is of advantage.

In cases of generalized peritonitis the procedure adopted must obviously depend upon the cause and degree of trouble. If the exudation be serous, it will suffice if the fluid be evacuated, if the peritoneal cavity be gently dried in its most dependent parts by means of gauze sponges, and if the abdomen be closed without drainage.

When the exudation is sero-purulent, it is in many cases desirable that the cavity be irrigated. The fluid which appears to be best suited for this purpose is a six per cent. salt solution made warm. After the washing, the depths of the peritoneal cavity are dried, so far as is possible, with sponges, iodoform powder is very freely dusted over the portion of the serous membrane most involved, a long, rubber, fenestrated drainage-tube is introduced, and the abdominal wound is closed. Any treatment directed against the cause of the peritonitis will be independent of these measures.

There are cases in which the peritonitis is more plastic in character. The intestines are found to be matted together with grayish lymph, which may be present in considerable quantity. The breaking down of these adhesions causes no little amount of bleeding, and such a step is evidently destructive of a certain desirable process of repair. Still, in order to search for the cause of the peritonitis, assuming such search to be indicated, and to set free an amount of exudation which is imprisoned between the attach coils, this freeing of adhesions must be to a certain very limited extent carried out. There will probably be a sero-purulent exudation in the belly cavity, and the gentlest movements of the fingers among the recently attached intestines will set free more fluid, which will be probably less opaque. A clump of adherent intestines will often cover and protect a perforation, and the ubiquitous fingers will many times close such an opening with more speed and security than are provided by any system of suturing.

As the surgeon, therefore, reaches what appears to be the starting point of the peritonitis, he must proceed with the utmost caution, and be not only prepared, but rather inclined, to leave the actual *fons et origo mali* undemonstrated. The main purpose of the operation is to allow a noxious exudation to escape, and, if possible, to free the peritoneum of the cause of its trouble. In the class of cases now under discussion, a perforation will be very often the starting point of the peritonitis; the lapse of time and the plastic character of the inflammation afford evidence that the perforation is, for the time being, closed. If the operator can rid the serous cavity of the effects of the perforation, he may often leave the breach itself to be dealt with by natural means. The wisdom of doing no more than is necessary, or as little as is obvious, is well illustrated by these cases.

Irrigation.—Mere blood is better removed from the peritoneal cavity by sponging than by irrigation. If the operation area be well circumscribed by sponges, if the shoulders be raised so that blood will reach the more dependent tracts, and if a sponge be introduced into the pelvis at an early stage of the procedure, there is little trouble with blood-clot. Coagulated blood is certainly very much more easily and certainly removed by means of gauze sponges than by a stream of water. The same observations apply to what may be termed healthy cyst contents, to fluid from hydatids, to bile, and to matter escaping from the stomach or intestine. With careful plugging and a watchful use of sponges a wide-spread extravasation is uncommon. If it does take place, the gauze can usually reach it. Irrigation would possibly have the effect of spreading the noxious fluid—as, for example, intestinal matter—over a still wider area. It may be said, therefore, that if certain precautions be taken, the cleansing of the peritoneal sac may be best and most safely accomplished by dry sponging.

If there be a considerable outpouring of such a material as putrid pus, or if there be a copious escape of gut contents, as from the giving way of a distended bowel above a point of obstruction, then it may be better that the whole peritoneal cavity be irrigated. In such a case the extravasated fluid and its wide distribution would render its complete removal by sponging difficult.

This irrigation is best conducted by the following means. The fluid used is a sterile six per cent. salt solution at blood-heat. It is introduced at low pressure, but in a wide stream. The irrigating-tube is of soft rubber and may have a diameter of three-fourths of an inch. The tube itself is introduced into the belly cavity. The flow through it can be regulated by a clip. Any form of rigid nozzle is to be most strongly condemned. The solution should flow gently into the abdomen. The peritoneal cavity is to be flooded and not to be scoured out with a violent stream of water, which hisses and rushes from a vulcanite nozzle as from a miniature fire-hose.

When the belly cavity is quite full of fluid, the surgeon's hand—which is already in position—is moved to and fro among the intestines with great gentleness. The coils of bowel are thus rinsed.

By a movement of the hand and by pressure here and there, the fluid overflows from the wound and is replaced by the steady stream.

As the water which escapes becomes clear, the upper end of the operation-table is raised, so that the shoulders are much elevated, and then little has to be done but to wash out the most dependent parts, including especially the pelvis, and so allow the upper parts to drain. Finally, what fluid remains in the pelvis is removed with sponges, and a sponge in a holder is retained in the bottom of the pelvis during the introduction of the stitches, and only withdrawn at the last moment.

Drainage.—It will be allowed by most that drainage is necessary when either an actually noxious material is left in the peritoneal cavity or when it is assumed that an extensive effusion will follow upon the laparotomy. Considerable differences of opinion must exist as to what constitutes, either in substance or in amount, a noxious material, and also to what extent a possible effusion is to be met by drainage.

A stout rubber drainage-tube of large size and well fenestrated, passed into the midst of the area which is the most disturbed, appears in most cases to answer all reasonable purposes. It is not suited for most tuberculous cases. It must be assumed that the surgeon has no objection after the operation to frequent and perhaps extensive changes in the patient's position for the purpose of assisting the process of drainage. The author has seen no harm arise from a liberal fulfilment of this object. In certain instances, some of which have been indicated, a gauze drain appears to be better adapted for the case than a rubber one. This drain is simply composed of a long strand of iodoform gauze about one and a half inches wide and some five or six layers thick. It appears to have been first advocated by Bardenheuer. In a case of purulent peritonitis, Jalaguier has passed these strands of gauze in all directions among the intestinal coils from the diaphragm to the pelvis with good result.

A like proceeding in like cases is advocated by Steinthal.

The great objections to the iodoform drains are these: They may induce symptoms of poisoning if very extensively employed, they are most difficult to remove unless there be a free discharge, and their use is apt to be followed by ventral hernia.

Some surgeons, either to supplement or to replace drainage, allow the wound to gape, or support it merely by a few quite loose sutures. This measure has been especially advocated in the treatment of perforative purulent peritonitis.

In conclusion, it only remains to be said that the surgical treatment of peritonitis has not yet reached a position which is either satisfactory or secure. There has been no lack of boldness in the measure used and little sense of discouragement at the results obtained. Surgical enterprise has been directed against effects and against damage done, rather than against causes and the beginnings of evil. The surgeon holds the same position in regard to peritonitis which was held some thirty years ago in regard to wounds and more accessible forms of inflammation. At that time he dealt only with the consequences of pathological wrong doing, just as now he concerns himself with the prevention of troubles which he has learned to control. Peritonitis will be more successfully treated when measures can be directed against the sowing of the wind rather than, as now, against the curbing of the whirlwind.—Fredrick Treeves, in *Therap. Gaz.*

CLINICAL NOTES ON ELECTRICITY.

To-day, in pursuit of our general plan of taking up the various modalities of electricity in medical use, we will turn to Franklinism. You see before you the best modern type of the Influence Machine and the various electrodes. You are already familiar with the special modes of administration.

The chief objections to statical electrization is that the apparatus is not portable, and that it is expensive. These disadvantages are more than counterbalanced by the great efficacy of this current in properly selected cases, and where we can have the opportunity of using it. You have often expressed your surprise at the results you have seen in this clinic from its use. For my part I do not consider any physician thoroughly equipped to combat the great classes of chronic disease and functional disease unless he has an Influence Machine and knows how to use it.

This machine looks complicated, but it is really simple. It comprises the fundamental laws of all kinds of electricity. If you understand static electricity, you will understand the others. The principles of the Leyden jar are all that there are in any kind of electricity.

What is here called "electricity" is not in the tin foil of these jars, but in the glass. The molecules of the glass are distorted and strained, and may be so strained that the glass will break. When there is an electric shock, vibratory motion is transmitted as an electric current. The tin foil is a conductor, and the potential of a conductor is the same in every part of its mass. Thus the glass discharges its strain at all points.

"Static" comes from the Latin word *sto*—to stand. It was called so because electricity stood on an insulated surface. But if it jumps off as a spark, it is flowing or kinetic electricity. Some consider static electricity of no use, because, they say, it is on the surface, and therefore superficia. in its effects. Experiments show that it does not

stand still at certain times, as, for instance, when it escapes as in the dry "electric bath." It becomes flowing, and so the word static is a misnomer so far as the actual treatment is concerned. Put the patient on an insulated platform, and connect with either pole. The charge is in direct ratio to the surface. When the patient is thus charged, the electricity is on the surface, but when the spark is drawn, it is in the patient.

The air is one of the greatest non-conductors there is. There would be little left to electrical science if air was a conductor of electricity. The spark is neither taken nor given. It is the composite effect of two electricities. The union is called a spark. When the patient gets the spark, the charge on the surface has rushed through him to that point. No conductor interferes, as the resistance is comparatively so little. In the galvanic and faradic electricity the voltage is comparatively small, but in static the spark ten inches has a voltage of 1,000,000. The galvanic has a large number of cells to get enough voltage. This machine is best for pressure or voltage. The ordinary of sixty volts will sometimes be enabled to overcome resistance. In this machine 600,000 volts are employed to overcome resistance, and hence it is so good in a large class of diseases where we wish a local penetrating effect, as in chronic rheumatism. It penetrates deep into the joints, the molecules are distorted and strained and changed in the diseased tissue, and a new nutrition is set up. Electricity is here most carefully measured. The nerve fibres receive a neural impulse and the muscles contract. When the spark strikes the tissue, if too strong, there may be a superficial sloughing. It acts to agitate and change the nutrition of tissue. It is an alterative, a tissue changer, and static is the best of the electricities for this purpose. It is difficult to define its limits. Its effects are general and far-reaching. The body is stirred up and change takes place. How do we know it does work? For some say the effect of all electricity is due to suggestion.

One real evidence that it does work is the effect on the circulation. If a patient sits fifteen minutes upon the insulated platform, the pulse will usually be raised fifteen to twenty beats. In Tachycardia it was first observed here, that the pulse was lowered from 140 to 90 in a few minutes. Temperature is also raised and lowered.

In the ordinary neurasthenic the temperature is often one-half to one degree lower.

In hypochondria, neurasthenia, and in many other functional conditions, I have observed that there is a lowered temperature; give static electricity fifteen minutes and the temperature will usually become normal.

Where the temperature is above normal we may lower it. I have deduced this law. Both in pulse and temperature static electricity produces an equilibrium. This is true so far as I have observed. It would appear that the thermic and other nervous centres were effected.

Metabolism is the sum total of chemical exchanges that take place to constitute life. If oxidation is good, we have certain waste products. If oxidation is not good, we have other deleterious waste products, like the uric acid diathesis. Static electricity increases combustion, diminishes uric acid and increases urea.

Examine the urine of those suffering from mal-nutrition before giving static electricity, and after giving it, and you will find the urea increased and the uric acid diminished. Thus you give static electricity for mal-nutrition, and cure a large number of patients. Electricity is a general agent for producing general changes in mal-nutrition. You can use it with great success in anæmia, chlorosis, neurasthenia, hypochondria, melancholia, gout, rheumatism, in muscular rheumatism and in neuralgia, neuritis and chronic synovitis.

We can also use it to secure local effects, as at affected areas in spinal cord diseases. In paralysis you can pick out and put in action, if that is possible, each muscle in the body. For paralysed muscles, the spark fulfills the ideal requirement that the muscle should be stimulated periodically—that is to say, with a brief interval of repose (30 to 60 sparks per minute), in order not to do more harm than good, by establishing physiological fatigue and consequent increased waste in the muscle. The continuous stimulation of nerve or muscle is to be avoided.

An advantage of some moment in the use of statical electricity is that the patient is not obliged to remove the clothing.

To this machine, which is the new Morton-Wimshurst-Holtz machine, manufactured by the Galvano-Faradic Company of this city, I have added my own inventions for producing currents. The machine is primarily a Holtz machine. Wimshurst substituted rectangular glass plates for the round and stationery plates of Holtz, and I have added switch devices and the mechanism by which the currents discovered by myself are created and delivered.

For instance, we will now test the "static induced current," as I named it when I discovered it in 1881. We would now term it an oscillatory current. It has an enormous "frequency" or rapidity of oscillation or alternation. It is, of course, an interrupted current. I convey it through the bodies (makes the experiment) of ten of you at once, and you notice the peculiar diffusive, painless, penetrating character of the current, while at the same time your muscles are put into a state of rigid contraction.

As you know, I do not believe that there is any such thing as a true electric anæsthesia, but so

far as any current produces a partial numbness, a subjective feeling due to special sensory changes, this current possesses the quality to a higher degree than any other. In this respect it produces a relief superior to that produced by the much talked of "fine wire coils" of the ordinary medical induction apparatus. The current may be used exactly as one would use the current from the secondary of an induction coil. It may be regulated by a water rheostat. Those who have used it internally in gynæcological work speak highly of its soothing and numbing effects, and of its effects in producing desirable circulatory and nutritional changes. I have found it of great value in sciatic neuritis and in other forms of neuritis and neuralgia.

Even in electro-diagnosis I have found that the spark has a distinctive value, for by its aid we may ascertain at an earlier moment than is possible by present methods the onset of the degenerative process. I have deduced this law, viz.: that *the earliest sign of the reaction of degeneration is the failure of a muscle to respond to a spark which will set a corresponding normal muscle into contraction.*

This exposition is extremely elementary, gentlemen, but we all understand that its chief value to each one of you is that you take a personal part in the experiments and the administrations, and in examining the patients and apparatus.

I have, however, I trust, said enough to make it clear that in Franklinization we possess a valuable agency for the treatment of many important diseases and morbid conditions.—Dr. Morton, in *The Post Graduate.*

SURGICAL SHOCK.

Dr. Westmoreland has courteously insisted that I should occupy the time alloted to him with some remarks upon any subject of my selection. I regret his great hospitality deprives the Association of the pleasure of hearing his interesting paper, and, that it shall not entirely go by default, I shall in a few imperfect remarks address myself to his subject, which he will, of course, elaborate.

Surgical shock is the subject of the greatest possible interest to us all. It is not one of those subjects that unfortunately is brought into the proceedings of a general body like this, and is only of interest to a few. The specialist sometimes, in his presumption and egotism (I can say that, for I happen to be that sort of a fellow myself), assumes that the general audience is interested in his particular fad or theme. This paper, however, of Dr. Westmoreland's commands the interest of all. Shock, as the surgeon meets with it and considers it, is due to excessive or overstimulation of the sensory nerves. There are so many factors as causal elements, it is often difficult to designate the special condition or circumstance giving rise to it. The injury itself to the vital tissues, the loss of blood, the circumstances attending surgical operation and mental impressions, all enter as causes. Profound shock, such as the surgeon is called upon to relieve, is a familiar picture to you all. You at once recognize it in the compressible and intermittent pulse, the hurried thoracic respiration or the deep sigh, the relaxed condition of the general muscular system, the profuse diaphoresis, the pinched countenance, the collapse of the curve of the lips, and the voluntary escape of urine and fæces. It is important that we should differentiate this condition from concealed hæmorrhage, and in surgery of the abdomen especially should we ever bear in mind that the so-called secondary shock is in reality but a symptom of internal hæmorrhage due to imperfect surgery. Memory of one of my early cases haunts me still. The surgeon is sometimes called upon to relieve shock, but more frequently to prevent it. I was much impressed with the words of our eloquent orator, Dr. Benedict, when he said this morning there was much in mental impression. I believe there is much in impressing the patient with confidence in you. So deport yourself that the patient may feel that his trust is well founded. If the patient is thoroughly imbued with the idea that the operation is the last of him, and that the surgeon has small hopes of his recovery, such patient is sure to sustain the full measure of shock. The manner of administeriug the anæsthetic greatly influences shock. I think it wise to precede the administration of ether with the hypodermatic injection of morphia and atropia. I am one of those who believe in the minimum amount of ether that is necessary. I am fully aware that some surgeons use half a pound to a pound of ether during an ordinary operation, completely waterlogging their patient with it. I carry the patient under ether slowly, not forced nor strangulated nor drowned with it. The temperature of the operating room should be about 75°—a little uncomfortable, I grant you, for the surgeon, but better for the patient. With the introduction of the practice of aseptic surgery, it is quite the fashion for the surgeon to cover the patient with towels saturated with bichloride water. I know of no measure so deleterious to the patient—no step in the technique so certain to favor shock as this. You can accomplish all you wish with dry sterilized towels. The wet ones ruin the instruments, irritate the skin, and in cooling chill your patient. By the careful administration of the anesthetic, by securing the proper temperature for the operating room, by keeping the patient dry and warm, with the extremities well wrapped in blankets, I think we may in a great measure prevent shock Whether the operation be one in general or special

surgery, it should be expeditiously performed. While I deprecate hurried and incomplete methods, I think the habit of many surgeons, who stand and leisurely wash their hands to demonstrate the technique to students, is to be strongly condemned. The patient should receive absolute and undivided attention of the operator. "Chronic surgery"—that is, unnecessarily prolonged operations—is responsible oftentimes for shock. Unavoidable hæmorrhage may be the cause of shock; if so, we should take means to restore the patient at once. Sufficient attention has not been given to intra-arterial injections to overcome the acute anæmic at the time of operation. This is particularly valuable in railroad surgery. The three most important agents that we possess to overcome shock are, first, if due to hæmorrhage, injections of saline solutions directly into femoral artery; high rectal injections of hot saline solutions; if due simply to sensory disturbance, strychnine, digitalis and atropia are our remedies.

In regard to the propriety of operating when the patient is under shock, I do not know that this phase of the subject is within the province of this discussion. Railway surgeons have to contend with that more than any of us. It is the habit of some gentlemen to top off limbs as fast as they can get them in order to secure a better fee. I know, gentlemen, that this is so, and the practice should be deprecated. In the cases of mutilation of the limb, it appears to me it is altogether unnecessary to do anything except to provide against the occurrence of hæmorrhage, protect the limb and endeavor to prevent decomposition and infection and wait for reaction. If the patient does not react, he would have died anyway, and surgery would have received the opprobrium.

One word more and I have done. In abdominal operations there is one condition that often occurs, namely: a condition of profound nausea attended by shock. In that condition I have employed with the most satisfactory results two measures, namely: high rectal injection and irrigation of the stomach. In such cases I have washed out the stomach and resorted to rectal injections, and have always found that this method is productive of more good and quicker stimulation than any other.

I thank the Association for the courtesy it has extended to me, and wish to say this: standing here as I do, at the feet of the Nestor of Southern surgery—a man whose work has made for him and your State an everlasting name (I refer to Dr. Gaston), I think it is the height of presumption that I should further trespass upon your time.—Richard Douglas, M.D., in *Southern Med. Rec.*

THE NEW TREATMENT OF DIPHTHERIA.

It seems likely that yet a new boon to humanity may ere long be anticipated from recent knowledge gained by experimental researches. Sir Henry Roscoe's interesting and able speech at the recent meeting of the National Health Society at Grosvenor House, directed public attention to the remarkable results obtained by Ehrlich, Kossel, and Wassermann in the treatment of diphtheria. A full summary of these was given in the *Epitome* of May 5th. They deserve to be put to the test in this country as soon as possible. Various investigations have recently been made, especially by Behring and Kitasato, on the antitoxins of tetanus and diphtheria, and they found that a substance was present in the blood serum of immune animals which had the power of conferring a certain degree of immunity in other animals, and even of arresting the disease when it had begun. These facts were applied by Tizzoni and Cattani to the treatment of tetanus in man, but with only imperfect results. The authors have followed the same lines in applying the method in the treatment of diphtheria, but they have taken special measures to obtain a particularly powerful antitoxin for the purpose. They began with producing immunity in goats by injecting increasing quantities of boiled cultivations of diphtheria bacilli, and the degreee of immunity was subsequently further increased by injecting larger and larger quantities of extremely virulent cultivations of diphtheria bacilli, The serum of these animals thus contained large quantities of the antitoxin, and before going further they devised a method of measuring accurately the exact amount present. It had been found by Behring and Kitasato that if the poison and the serum antipoison were mixed together in a test tube in proper proportions they neutralized each other, and that the mixture when subsequently injected into an animal was inert. They took as a standard of the poison a material of which 0.3 g. per 1,000 g. of the body weight was a certainly fatal dose. For animals of 200 g. to 300 g. weight they used ten times this amount, namely, 8 c.cm., and then added to this 2, 3, 4 g. etc., of the serum to be tested. The mixtures were then immediately injected into a series of guinea-pigs, and if the poison had not been completely neutralized this was evidenced in 24 or 48 hours by local infiltration at the seat of injection, and by loss of body weight. In this way the exact amount of any given serum required to neutralize 0.8 g. of poison was ascertained. As the unit of immunity they take serum of which 1.5 mg. neutralizes 0.8 g. of poison, and in the treatment of children they employed a quantity of serum containing an

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amount of antitoxin representing 130 to 200 immunity units.

The investigations were carried out on 220 children suffering from diphtheria (proved by bacteriological examination) at all stages and in various hospitals in Berlin. The rough result is that of these 220 cases, of which 64 had already required tracheotomy before the treatment was commenced, 52 died and 168 recovered. Of the 153 cases in which tracheotomy was not performed only 22 or or 14.3 per cent. died, the cause of death in these instances being in 8 sepsis, in 7 pneumonia, in 6 complications, such as paralysis and nephritis, and in one acute tuberculosis. Of the 67 cases in which tracheotomy was done, 30, or 44.9 per cent. died, the causes of death being in 4 sepsis, in 23 pneumonia, in 2 of sequelæ and in 1 of acute tuberculosis. Many of these cases were, however, admitted several days after the disease had commenced and when there was hardly any hope of saving them. The results are very striking if they are considered in relation to the duration of the disease. Six cases were admitted during the first 24 hours, and all recovered; 66 were admitted on the second day and only 2 died. Thus of 72 cases admitted during the first forty-eight hours only 2 died. Of these 72 cases tracheotomy was necessary in 9, and the 2 which died were 2 of those in which tracheotomy were performed. On the third day 29 cases were admitted, and of these 4 died; on the fourth day 39, of which 9 died; on the fith day 23, of which 10 died. The percentages of recovery according to the day of admission after the disease commenced were therefore 100 per cent., 97 per cent., 86 per cent., 77 per cent., 56.5 per cent., etc.

In most of these cases only a single injection was made, but subsequently in bad cases several injections were employed, and the authors think that they might have saved some of those which died, especially from sequelæ (paralysis, etc.), if they had used repeated injections.

Before using the material it was first ascertained that it was quite innocuous and produced no effect when injected into a healthy individual. When injected in cases of diphtheria it was only when large amounts were employed that any immediate effect on the pulse or temperature was observed, but in a certain number of cases there was an almost critical fall of temperature and pulse on the day after the injection. The authors explain the fact that, as a rule, the temperature does not immediately fall, because it is only in the very early stage that the disease is pure, and it very soon becomes complicated with septic bacteria, which keep up the temperature, although the diphtheritic poison has been neutralized. The authors' conclusions are as follows: 1. The fate of the patients depends on the treatment during the first three days of the disease; hence the serum should be injected as soon as possible after its commencement. 2. In mild cases the amount introduced should be at least 200 immunity units; in severe cases and in those where tracheotomy is necessary, 400 units. 3. The injections should be repeated on the same or the following day, according to the general and local symptoms; the total amount varying according to the severity of the case, from 500 to 1,500 immunity units. In 30 cases where repeated injections were employed, some of them very severe cases, 16 of them requiring tracheotomy, only 4 died. These four having had tracheotomy done, with little or no relief to the breathing.

Full details of the methods and cases will be published as soon as possible, and it is to be hoped that this method will be put to the test elsewhere as soon as possible. Already it is being tried in Paris with most satisfactory results.—Ed., *Brit. Med. Jour.*

THE USE AND ABUSE OF ARSENIC IN THE TREATMENT OF SKIN DISEASES.

When Erasmus Wilson so strongly advocated the usefulness of arsenic in the treatment of skin diseases, without discriminating closely, and only qualified his indorsement with the caution to be employed in its use, he but voiced the enthusiasm which at that time had placed arsenic upon the pedestal that it still tends to occupy. At the time of Biett, Wilson, Cazenave, Schedel, Behrend, and others, the general practitioner had scarcely escaped from the simple classification of skin diseases into eczema, scrofula, and syphilis, with an occasional inspired diagnosis of psoriasis, herpes, or the like. It is hardly to be wondered at, then, that the general practitioner should welcome a remedy that had found favor with the dermatologists of the time in the very diseases under whose shelter he had found a refuge-diagnosis. Cazenave did not qualify his adjectives when he wrote of arsenic as an heroic remedy, meaning not radical but supreme. Almost every good thing in medicine has found its abuse in its early recognition, and soon a rational measure is made the excuse for enthusiastic excess, and the true value of a remedy is hidden by its indiscriminate usage.

Arsenic has drifted from its essential usefulness, and has become to a multitude of routine practitioners a panacea for all cutaneous affections. At the slightest intimation of a disturbance of the skin there is an echoing response in the physician's mental *vade mecum* of arsenic. In its various shapes and combinations, arsenic is administered for a variety of skin affections, many of which could in no rational way be

influenced by the drug. I have seen typical cases of the parasitic diseases of the skin, even the itch, treated for a long period with arsenic, as if painting the cellar would patch the roof.

The reaction has come, and it is a rational one at that. Instead of being employed to meet all possible and impossible indications, arsenic can be relegated to specific usefulness in therapeutic measures, and permits only of exceptional variations from its proper sphere. After long study and investigation, Dr. Fox, of New York, in collaboration with other dermatologists in this country, arrived at the conclusion that arsenic was not only of no service in some of the diseases in which it is often administered, but that it did positive harm, not only in the production of additional trouble in the skin, but by preventing the use of other and better remedies. Moreover, these investigations elucidated the fact that there was no series of cases in which arsenic could be said alone to have produced a cure.

With this kernel of sound meat for our consideration, I feel that a logical discussion of the uses first, then the action and abuses of arsenic, will, in some small measure, carry a germ of the reaction to those of you who have a *penchant* for arsenic administration, without knowing just why.

The action of arsenic is twofold—local and general. Topically applied, its action is first of all stimulant and irritant; and if sufficiently brought in contact with the surface it is caustic. Generally, arsenic is a nerve tonic, acting on the vaso-motor centres, and decidedly affects the peripheral nerve terminations. Its action on the spinal cord is irritant, and an overdose is evidenced by a widespread multiple neuritis. The evidence indicates that small doses check tissue change and decrease nitrogenous elimination, while large, toxic doses have the opposite effect. Arsenic is a direct stimulant to nutrition. It is alterative.

Upon the skin, the effect of ingested arsenic is much the same as that of the drug when used locally. There may result inflammatory redness, vesicles, pustules, etc., a sensation of heat, burning, pain, and there may be exfoliation of the epidermis in large flakes.

Arsenic is selective of diseased tissue, picking it out and acting on it. The drug is known to exercise its influence almost exclusively upon the epithelium of the skin. Its chief action here is upon the mucous layer of the epidermis. It has a similar action upon the mucous membranes, viz., increasing the hyperæmia. At first stimulant to the cell-forming elements of the rete, arsenic soon causes such a degree of overwork that the power of cell-production is finally lost, or, as Jamieson well expresses it, it induces in them a premature old age.

In those skin diseases, then, in which an alterative action is demanded, arsenic is of service. Its stimulant action is indicated when there is a stagnation of the cell-forming element in the rete, or when this element is depressed by a chronic inflammatory process. Just how long and just how far this stimulation can be kept up must be judged from the degree of activity of the cell-production.

Arsenic must find some usefulness in the diseases of the skin of vaso-motor origin, whether acute or chronic, and this point should be determined before the drug is advocated or condemned. In deep-seated lesions of the skin, from what we have seen, arsenic is not indicated, and if used, the result would be questionable. Because of the tendency to produce hyperæmia, arsenic ought not to be given in acute inflammatory conditions, which the drug must necessarily make worse. On just the same account it is contra-indicated in the pruritic diseases, because, in itching, the chief underlying condition is hyperæsthesia, whether in its common signification of an excessive irritability of the sensory nerves, or in the sense of an excess of an engorgement of sensation. The attendant irritation and subsequent hyperæmia make itching persistent, and arsenic would only add to the production of the agony.

It is becoming more and more the practice of dermatologists to treat cutaneous diseases according to their pathology. Subjective symptoms, of course, are met, as in other diseases, but the etiology is investigated, and the treatment based on a pathologic plan.

In the parasitic diseases, the most effective antagonist to the special parasite is selected for use; in the pustular, or the coccogenous diseases, as Hyde has recently called them, antiseptic measures are employed locally, while, internally, anti-pyogenic remedial agents are administered. When there is an acute inflammatory condition in or on the skin, the points of attack, both locally and internally, are through the reduction of the inflammation.

The diseases for which arsenic seems to be especially useful are few. At the top of the list stands psoriasis, then chronic eczemas, and the lichens, with some of the hydroa.

With many dermatologists arsenic is pre-eminently the essential treatment of psoriasis. According to Brocq, Vidal used arsenic for a long time, to the exclusion of other medication. He administered the drug in large doses for a long period of time, and at the cost of systemic intoxication. In recommending arsenic in chronic psoriasis, Brocq apologizes for its accidents, and warns the physicians to guard against the pos-

sible inconveniences of treatment. Pye-Smith commends the use of arsenic in psoriasis, but suggests that it be carried to tolerance, then the dose dropped to the original small dose, and the same method of administration resumed. Duhring says that arsenic is unquestionably of great value in psoriasis, but should be withheld until the disease is settled in its course. Weyl and Anderson, on the other hand, state that the more recent the eruption, the more readily, as a rule, psoriasis yields to arsenic, while chronic and relapsing cases are more rebellious.

It is noticeable that arsenic is of service in some cases of psoriasis, while in others the results are negative. While the etiology of psoriasis is still *sub judice*, and the neuropathic vies with the parasitic and the syphilitic element as causative factors, it is difficult to determine what the reason should be for the discrepancies in the effect of treatment. It must be remembered, however, that psoriasis is a self-limited disease, tending to get well of itself. It recurs periodically and has seasons of recurrence, be it winter or summer, spring or fall. Some cases get well in spite of all treatment, and it is questionable if arsenic plays any particular part in the cure. Few cases of psoriasis are treated internally alone, and the external treatment may deserve the credit. Granting, however, that arsenic is capable of removing the disease in given cases, and fails in others, it must act in the first instance, if the therapy of the drug as acknowledged is correct, through its effect upon the peripheral nervous system first, or by its direct local presence. Its failure to act in one of two apparently parallel cases would indicate that this nervous element was lacking in the case that failed to respond to arsenic.

The pathology of psoriasis gives evidence of cell-exudation and cell-proliferation. There is moderate inflammation, with increased development of the layers of the rete. There is involvement of the papillæ of the corium, and a consequent and enormous increase in the horny cells of the epidermis, from the rapid proliferation of the aborted cells from the mucous layer. Auspitz contends that psoriasis is not inflammatory, but due to an anomaly of the process of cornification, or the keratinization of the epithelial cells. The etiology of psoriasis is unknown, the pathology still in some question, and the treatment thoroughly empirical. Arsenic occupies a strong place in the list of remedial agents, and seems to act in overcoming the cell-aborting process of the rete by stimulating a healthy activity, while the general tone of the skin is raised through the stimulating effect of the arsenic upon the peripheral nerve-plexuses and the nerve-endings themselves.

The term lichen really includes but two types of a chronic inflammatory eruption consisting of papules. In lichen ruber acuminatus the papules are conical and tend to coalesce. In lichen ruber planus they are flat, square, angular, and vary in color from pink to violet, although sometimes white. The essential pathologic process in both types begins in the corium. In lichen acuminatus the process is chronic and inflammatory, beginning in and around the hair-follicles, with a consequent enlargement of the sheaths of the follicles through a marked cell-development. In lichen planus the process begins around a sweat-gland, usually in the upper part of the corium, resulting in a subsequent thickening of the rete and enlargement of the papillæ by a down-growth of the interpapillary processes. The etiology of both, like that of psoriasis, is still an open question. That the distribution is suggestive of a nervous origin, and the itching (paroxysmal in type) suggests a nerve-hyperemia is about all there is in evidence. The indications for treatment are similar to those in psoriasis. In the lichens, however, the general health is profoundly influenced and nervous symptoms are present, notably nervous exhaustion, hysteria, and the like. Arsenic fails here, as in psoriasis, in many cases. In chronic cases the drug is certainly useful. It must act in hastening the shedding of the excessive cell-proliferation by controlling the nerve terminals.

Chronic eczemas and eczemas of reflex nervous origin form another group of diseases treated by arsenic. It should go without saying that in the acute types of eczema, in which there is edema, infiltration, vesicles, redness and itching, all evidences of an acute catarrhal condition, arsenic is absolutely contra-indicated. When this condition has thoroughly subsided, leaving behind a marked cellular deposit, with enough swelling, redness, itching, and scaling to determine its eczematous nature, then arsenic may be of service. Stimulation is the essential of the treatment, and by re-awakening the dormant cells of the rete, already on their way to connective-tissue degeneration, arsenic finds its usefulness.

Pemphigus and the tropho-neurotic diseases, with bullous eruptions, are favorably affected by arsenic. Nervous lesions are often found associated with pemphigus. These may be either vasomotor or tropho-neurotic; in either case constituting an indication for the administration of arsenic, one of whose properties is an influence upon the vasomotor center.

Dermatitis herpetiformis belongs to the same group as pemphigus, being associated, according to Elliot, Duhring, and others, with some reflex neurotic causation. Shock, grief, anxiety, overwork, pregnancy, and the climacteric in women, are among the important factors. Crocker classes dermatitis herpetiformis with hydroa, although the eruption is varied in type, and presents lesions

of papular and uticarial tendency, but more commonly characteristic bullæ. Most observers accept the neurotic factor in the etiology and confess the uncertainty of the pathology. The distribution and the resemblance to the eruptions of pemphigus, with the pronounced symptoms of nervous lesions, evidenced by a variety of manifestations, depression, melancholia not uncommonly, and the tendency to recur under conditions of nervous strain, all point to the neurotic factor. On these grounds, arsenic is given, and is found useful in many cases.

The diseases named form only a small part of a long list of cutaneous affections, but include those conditions which, from a rational standpoint, should yield to the accepted therapy of arsenic. They are but a fraction of the diseases for which arsenic is prescribed.

We have seen that arsenic is positively contra-indicated in acutely inflammatory diseases, excepting those of bullous type, distinctly referred to a vasomotor or nervous origin. Arsenic increases the hyperemia of the skin, and in cases of idiosyncrasy, or under prolonged administration, is capable of producing many local disturbances of the skin. Devergie was the first to announce the fact that cutaneous lesions may be caused by the internal administration of arsenic. These skin-manifestations may take the shape of papular, urticarial, vesicular, erysipelatous, and pustular eruptions. To these may be added an erythematous or scarlatiniform eruption.

According to Hutchinson, herpes zoster may be induced by the ingestion of arsenic, and in subjects predisposed to carcinoma arsenic may act as the determining cause. Boils and carbuncles occasionally result.

Among the inconveniences, as Brocq calls them, of arsenic administration, there is often marked brownish discoloration of the skin occurring on the face and various parts of the body. This occurred in two cases that came under my own observation. In one patient, a psoriatic subject, arsenic has been given for several relapses, and had last been administered three years before I saw the patient. There were numerous pigmented patches on the extremities, which seemed to have no tendency to disappear. In the second case, one of chronic eczema, Fowler's solution had been given for two months previous to my seeing the patient. There was marked brownish pigmentation in patches over both legs and thighs, which persisted, and was still present six months after the eczema was cured. Only recently Carrier has reported a case of pigmentation of the whole body occurring suddenly during the treatment of a case of psoriasis, and further complicated by warty growths upon the palms and soles, all following the internal use of arsenic. Mathieu has within a month reported a case of chronic arsenical poisoning in which the skin of the patient was bronzed, or slate-colored, in various regions of the body. On the palms and soles, as in Carrier's case, there was marked hyperkeratosis. These discolorations are attributable to the stimulated action of the prickle-cell layer, in which the pigment-cells are found, and, according to some authorities, in which the pigment is said to be formed.

These, then, are some of the chief accidents of arsenic administration. Notwithstanding these, it is advisable to use the drug in selected cases. But, in the face of these, is it justifiable to carry on a systematic use of the drug in diseases in which the indications are not for it or are positively against it?

Arsenic is popular in the treatment of acne, notwithstanding the fact that the drug has no action on the deep layers of the skin, while acne is essentially a disease due to inflammation of the sebaceous glands or hair-follicles, which are found only in the reticular layer of the corium or in the subcutaneous connective-tissue layer.

Arsenic is often given in the erythemas, both simple and exudative, in spite of the evidence of the presence of acute inflammation in the skin, and marked exudation, which the use of arsenic tends only to increase.

Urticaria is essentially an exudative disease, attended with œdema, which is the pathologic origin of the clinical evidence, namely, the wheal. The vasomotor element in the etiology might excuse the administration of arsenic, but the clinical symptoms, with the pathology, would more than counterbalance this. Aside from increasing the exudate, arsenic tends to produce œdema, and in overdoses is itself responsible for an urticarial eruption.

Malaria, exposure, and the ingestion of certain medicaments, are among the causes of herpes zoster. The direct occasion of the eruption is a peripheral neuritis. How often is arsenic given for this condition, although contra-indicated by its physiologic action, because the drug is a stimulant to the peripheral nerve-endings, and in tonic doses, or given for a long time, it produces this very class of eruption. Nielssen found ten cases of herpes in 557 cases of psoriasis treated with arsenic, while not one case of herpes occurred in 220 cases treated with potassium iodide.

I have referred to the indiscriminate use of arsenic in parasitic diseases of the skin, which can in no way be affected by the drug. We cannot deny that in some such diseases of the skin arsenic is of undoubted service, but these cases must be selected. Even in those diseases in which there is some specific and rational effect expected from the drug, there is in many instances conspicuous failure. It must be remembered that in many cases of cure attributed to arsenic, some other

element in the external or internal treatment may be responsible.

When dermatologists themselves confess that the accidents from arsenic form a large proportion of the drug-dermatoses, and the patient is often afflicted with a permanent souvenir of large and heroic doses of the drug, while the skin disease aimed at pursues its course not much affected, we should call a halt and question the value of the drug and its indiscriminate use.

We must arrive at the conclusion that instead of being the first, arsenic should be one of the last remedial agents to be used in the treatment of diseases of the skin, and when selected it should only be used in chronic diseases with a general distribution and in diseases associated with a neurotic element.—Dr. Dyer, New Orleans, in *Med. News.*

IS PYREXIA A FRIEND OR AN ENEMY?

The etiology, significance, and treatment of pyrexia is a stock subject of observation and discussion. It comes up again and again with the persistence of a poor relation, yet the opportuneness of its importunity can never be denied, seeing that we are still without a working hypothesis in respect of the causation and significance of fever. Should we, like our forefathers, see in fever a humour akin to a demon, fit only to be combated and exorcised by all and every means in our power, or ought we, as more recent observations would seem to indicate, to view fever in the light of a willing ally against the marauding and ubiquitous bacillus with its train of excrementitial toxines? That is the question, as Shakespeare once observed under slightly different circumstances. If pyrexia did not have some beneficial effects as in some way an obstacle to the bacterial invasion it would not, as was urged by an ingenious but somewhat too hypothetical speaker, have been perpetuated in the animal organism. Most of Nature's reactions are purposive, and, as we have failed in our efforts to suppress fever, we may well ask ourselves whether or not the rise of temperature which characterises all acute specific affections does not, like abscess formation in response to local irritation, tend to prevent the further elaboration of lethal processes? We know that, as a general rule, pathogenic bacilli can best be cultivated at the normal or a slightly lower temperature. We know too that variations of temperature within comparatively narrow limits seriously interfere with their development and proliferation. This fact alone affords matter for reflection. May it not be that the stimulation of the thermogenic centres is one of Nature's means of combating the evil genii in the shape of microbes which secrete the poisonous toxines, with the elaboration of which the pyrexial process is so closely associated? Is pyrexia, and, if need be, hyperpyrexia, not an attempt to sterilise the blood and the tissues of the agents that are working havoc therein? In considering the question of the thermometric phenomena associated with the specific fevers, we must, indeed, bear in mind that a certain, comparatively high temperature is as natural to a given diseased condition as is a normal temperature in health. A man afflicted with a pneumonia may really be more ill with a low temperature than when he presents the pyrexial phenomena usually associated with that disease. It is obvious on the face of it that the therapeutical indications in respect of fever are less simple and straightened than they appear at first sight, and these considerations serve to emphasise the difference in the action of the two great classes of antipyretic agents—those which act directly on the thermogenic centre, and those which merely reduce the surface temperature, and prevent the accumulation of heat within the organism. If a rise of temperature really represents an effort on the part of Nature to lessen the biological activity of the invading organs, we must be rendering sorry service by diminishing the irritability of the thermogenic centre in response to the stimulus given by the enemy. The result of antipyretic treatment, strictly so-called, tends to support this view. Professional opinion at the present time tends to discount the indiscriminate use of drugs of the antipyrine class for the purpose of reducing temperature. The patient, after the artificially-induced fall of temperature, is often worse off than when the fever was in full swing, and grave symptoms often accompany, and may even be said to measure the efficacy, of the antipyretic medication. An exception may, perhaps, be made in favor of drugs of the quinine-salicylic group which have a thermolytic effect in virtue of their bactericidal action. Quinine, for example, is most efficacious in suppressing malarial fever when given some hours before the attack, at a time when the temperature is subnormal. It is, therefore, less a thermolytic than a microbicide. It is hardly necessary to promise that purely clinical observation cannot be implicitly relied upon, for the data which it affords are conflicting, incomplete, and inconclusive. Our forefathers bled for fever, and in so doing they were, possibly unconsciously, acting on strictly logical principles. To withdraw a certain proportion of the microbe-laden blood from the organism is to reduce *pro tanto* the disease-producing causes, just as in local tuberculosis we seek to minimise the risk of generalization by the ablation of all accessible foci of infection. Venesection is out of date, and medicinal antipyresis has taken its place, but there are grounds for suspecting that the results are, to put it mildly, not more satisfactory, and public

opinion is just now somewhat hostile to this empirical meddling with the action of the vital centres. No such difference prevails in respect of what may be termed the external method of thermolysis—by cold baths, wet packs, and the like. Any evil effects dependent on recourse thereto can easily be avoided or averted by the careful application of common-sense principles. In future, it may well be that true wisdom may consist in treating fever as a valuable friend and ally rather than as an enemy to be fought at the expense of the organism.—*Med. Press.*

A CASE OF ELECTRIC SHOCK OF ONE THOUSAND VOLTS; INSENSIBILITY OF PATIENT TO PAIN; RECOVERY.

I am indebted to the courtesy of my colleague, Dr. W. M. L. Coplin, for the privilege of reporting the following case:

On the 20th of April, 1894, J. R., aged forty-four years, while engaged in repairing broken wires for the Bell Telephone Company, grasped the ends of a wire that had crossed an electric light wire, conveying one thousand volts. He received the full force of the current through his body, and was immediately rendered unconscious. He was thrown violently to the ground, and could not be released until the current was broken by a fellow-lineman, who cut the wires apart with a hatchet.

The man was brought to St. Mary's Hospital at 11 a.m., within half an hour of the accident, and I saw him a few minutes after his admission. He was in profound coma, with pupils widely dilated and irresponsive to light, breathing stertorous, face pale and bathed in perspiration. About ten minutes later he vomited, and then became wildly delirious, so that it required the combined efforts of three men to keep him in bed. He moaned and cried incoherently, and tonic and clonic convulsions of a severe type succeeded each other with great rapidity. At this time we were unable to take his temperature on account of his extreme restlessness, but to the hand it appeared about normal. His respirations now lost their stertorous character, and became more of the Cheyne-Stokes variety, averaging about ten per minute for two hours after his admission. The pulse was eighty per minute, of high tension.

At 11.40 a.m., the man was given morphin, gr. ¼, by hypodermic injection; and as the delirium and convulsions did not abate, the injection was repeated at 12.10, and soon afterward he gradually quieted down. About 1.30 p.m., as his respirations were alarmingly feeble, he was given strychnin, gr. $\frac{1}{30}$, by hypodermic injection, with excellent effect. At 2 p.m., he fell into an apparently normal sleep, from which he awoke four hours later, conscious, but slightly dazed, and feeling, as he expressed it, "tired and sore all over." On my visit to the hospital next morning I found that he had slept well during the night; his temperature was 98.8°, his pulse 72, his respiration 18. He complained of pain from a number of severe burns that he received during his contact with the wire. These burns were distributed irregularly in lines over the back, arms and legs, and evidently were caused by the intensity of the current, as the clothing which covered the affected areas showed no signs of having been scorched.

On questioning the patient as to the nature of the accident, he remembered perfectly all of the incidents of his morning's work up to the time when he grasped the wire that conveyed the shock through his body. After that moment he had not the slightest knowledge of what had occurred, and did not suffer the least pain until he awoke at 6 p.m., as already stated, to find himself in bed in the hospital.

The subsequent history of the case was uneventful. The patient made an excellent recovery.

In view of the employment of electricity by the authorities of certain States for the purpose of putting condemned criminals to death, the facts of the case related are of interest. Dr. J. W. Brown has published the history of an electrocution that took place at the prison at Auburn, N. Y., in which the condemned man received a voltage of 1,260 through his body for fifty-six seconds, and, being apparently dead, he was released from the straps. To the horror of those present, he gasped for breath and began to revive. He was placed again in the chair, but the current would not work, so that he was removed to the hospital, and developed a train of symptoms precisely similar to those observed in the case that I have reported. A second contact an hour and fifteen minutes later resulted in death in forty seconds. The case attracted great attention at the time, from the supposed agony of the condemned man, who was regarded by the newspapers as a hero on account of his sufferings. According to the statement of our patient, he was absolutely insensible to pain from the instant he received the shock; even the actual discharge of the current caused him no suffering; and were it not for the burning of his skin, he would not have been aware that he had met with an accident.

While it is to be regretted that the public is greatly exposed to accident from contact with currents of high tension on account of the almost universal employment of electricity as a motive and lighting power in our large cities, it seems to me that, so long as capital punishment has to be enforced as a legal penalty, the electric current, properly applied and of sufficiently high tension,

is the most humane agent yet devised for putting condemned criminals to death.—P. S. Donnellan, M.D., L.R.C.S., in *Therapeutic Notes.*

SUPPURATION.

The discovery by Ogston of micrococci in the pus of abscesses gave rise to the belief that suppurative inflammation was quite distinct in its nature from the more simple forms of inflammation, that it was a specific disease dependent upon a definite cause and not occurring without its agency. The researches of Koch into the infectious processes of wounds, and the more careful study of bacteria made possible by the use of solid culture media, however, disclosed the fact that several distinct species of bacteria were associated with pus-formation, and Koch consequently asserted that suppuration could not properly be considered a specific disease. Subsequent study has confirmed this opinion, and has demonstrated an etiological relationship to suppuration of a much larger number of bacteria than was at first supposed. The various problems connected with the occurrence of suppuration have thus become more complicated and have been the subject of much research during the past few years. The results of this study are carefully reviewed by Kurt Müller in a recent number of the *Centralblatt für Bakteriologie und Parasitenkunde*, 1894, xv., Nos. 19, 20 and 21.

While admitting that in a few instances inflammation with pus-formation has been produced experimentally without the agency of bacteria, Müller regards this to be of no practical importance, since suppuration as it occurs in man is unquestionably always the result of the action of micro-organisms. But the germs associated with suppuration are not the only factor to be considered in the study of its etiology, for the accumulation of the inflammatory products depends also upon the vital activity of the tissue upon which the influence of the germs is exerted.

The importance of the tissue in determining the occurrence of suppuration is shown by a number of circumstances. Thus, many germs occasionally producing suppuration do not habitually do so, apparently only acting in this way when the state of the tissue is such as to react in an unusual way to their influence. The bacillus typhosus, the bacillus coli communis, and the micrococcus tetragenus are examples of germs occasionally acting to cause suppuration in this way. Again, it is not unusual to find inflammation of less intensity than the ordinary suppurative inflammation caused by the germs which usually cause suppuration in its most virulent form. The staphylococcus pyogenes aureus not infrequently causes simple inflammation (pleurisy with effusion), or may cause only areas of tissue necrosis at the points of its lodgement in the body. Another interesting fact bearing upon this question of the part played by the tissue in suppuration is that its susceptibility may change with great rapidity. A case illustrative of this is cited by Müller. A man who, two weeks before, had suffered from a suppurating wound of the finger, presented himself with diffuse infiltration and redness about the shoulder of the same arm. When incised a considerable quantity of serous exudate escaped, but no pus. Cultures of this serum showed only streptococci. The wound was dressed aseptically. In three days the man died, and at the autopsy the whole region previously occupied by a serous exudate was found to be infiltrated with pus, which still showed only streptococci. It would seem that in this case the tissues must have undergone a change of susceptibility.

A change of susceptibility is also observed with change in age of the individual. This is exemplified by "spontaneous" osteomyelitis which is comparatively rare after the twenty-fifth year. It is also strikingly illustrated in the case of rats, which while young are exceedingly susceptible to anthrax, but when adult show great immunity to it.

It is evident, then, that the condition of the tissues must exert an important action in determining the occurrence of suppuration.

The germs which have thus far been described as at times giving rise to suppuration are: Staphylococcus pyogenes aureus, albus and citreus; streptococcus pyogenes, staphylococcus cereus albus, streptococcus cereus flavus, micrococcus pyogenes tenuis, micrococcus tetragenus, pneumococcus, bacillus pyogenes fœtidus, bacillus typhosus, bacillus coli communis and bacillus pyocyaneus. Of these the staphylococci, streptococci, and the pneumococcus are by far the most frequent causes of suppurative inflammation. To these Müller would add, and apparently with justice, the bacillus tuberculosis, the gonococcus and actinomyces.

Nothing can be more certain, then, than that suppuration cannot be regarded as a specific process. It results from the action of a great variety of micro-organisms which are profoundly influenced in this action by varying states of the tissues. It must, therefore be considered as nothing more than an intense form of exudative inflammation in which peculiar conditions of bacterial activity, or of tissue susceptibility, or of both, lean to an inordinate emigration of leucocytes and necrosis of tissue.—*Am. Jour. Med. Sciences.*

Prof. Keen says gall-stones that escape from the gall-bladder will often be the cause of obstruction at the ileo-cæcal valve.

INCONTINENCE OF URINE IN CHILDREN, TREATED WITH ATROPIA.

When the smallest physiological dose of atropia is administered the only symptom is dryness of the throat and mouth, possibly some disordered vision. When a larger amount is given this dryness becomes more intense and is associated with redness of the fauces, dilated pupils, disordered vision and possibly diplopia. Often from the first, certainly after a short time, in all cases the heart's beat becomes rapid, and after a large dose of the alkaloid, exceedingly rapid, often accompanied by a peculiar red flush on the face and neck, which may spread over the whole body. In very severe exhibitions of the rash, desquamation of the skin sometimes follows. Intelligence may remain perfect, but there is generally some lightness of head, giddiness and confusion of thought, as well as a staggering gait. Even with doses that are medicinal there are spectral illusions. Drowsiness is not a general or at all characteristic symptom. When a decidedly poisonous dose of belladonna or its alkaloid has been taken, all these symptoms are intensified; sometimes the patients are exceedingly violent and convulsions may appear, followed by stupor and paralysis. Lividity of the face, showing imperfect areation of the blood, is not seen in atropia poisoning, except in a stage of most imminent peril. Death is preceded by marked heart and respiratory failure.

Upon the muscular structure of the heart itself atropia acts as a depressant, but it would have to be taken in very large amounts to be apparent. On the other hand atropia acts, it is claimed, on the cardiac nerve centres as a stimulant, and unless taken in very large amounts does not destroy excitability of these nerves.

Evidence is directly in favor of the fact that atropia in small doses contracts the capillaries, and only when poisonous doses are given do they become dilated. Atropia acts on the peripheral filaments of the nerves, it is mainly eliminated by the kidneys, and its local action on the nerve filaments of the bladder, I have no doubt, is one of the modes of relief for incontinence, when the interior of the bladder is the seat of the trouble. We are all familiar with the local action of belladonna to relieve pain as in myalgia, lumbago, pleurodinia, etc.

In the last eighteen months I have treated five or six cases of nightly incontinence, all of whom responded satisfactorily to the atropia treatment when administered to its full physiological effect. In all my cases I used the metric granules manufactured in Philadelphia, commencing with the $\frac{1}{300}$ of a grain three times per day, increasing the dose gradually for the first two days. After that the increase was more rapid until there were some decided symptoms of distress; even then the dose was continued cautiously and the toxic symptoms would often disappear without decreasing the amount. In only three cases did I have to gradually decrease the dose that was being administered. It is also necessary in the treatment to require the child brought under your daily observation to consider the propriety of increasing, maintaining or decreasing the medicine. I find we cannot intrust to the parent the dose that is to be administered, and it is not improbable the mental effect of visiting the doctor every day is beneficial.

In one case a boy æt. nine years had wetted the bed every night from birth, and seldom less than twice a night. The first dose administered was $\frac{1}{300}$ of a grain; it produced such nausea with vomiting and general redness of the surface, that his parents were alarmed. I decreased the dose slightly for several days; the child that week soiled the bed only three time. The dose was then gradually increased daily with the result, at the end of the second week of a slightly improved record. The dose at the end of the third week had gotten to $\frac{1}{200}$ of a grain three times per day, with the result of additional improvement. The atropia was increased to $\frac{1}{100}$ of a grain before the child was cured. Singularly to state even at this dose, although the pupils were fully dilated, he never complained of his vision or any other unpleasant symptom. Nor did any of the children that I have treated though they played out in the sunlight. I will state with regard to this case that I treated the mother for typhoid fever while she was pregnant with this child. At birth it was fairly well nourished. It was born with a cleft palate and the eyes, as the child developed, showed a want of coördination; its digestion for a bottle-fed child was good. Two nurses were necessary as one was unable to attend it on account of its sleeplessness. I rarely gave it an opiate. Bromide and paraldehyde were given with only partial relief. I then put the child on the hyperphosphate, it immediately acted like an opiate and the child was a good baby from that on.

The second child was eight years of age, a robust, healthy looking boy who had been soiling the bed for five years. He was relieved very promptly and I withdrew the medicine abruptly. The incontinence returned in a few nights, and I had to recommence the treatment. The medicine was then gradually withdrawn, and the cure was completed.—Abstract in *Med. and Surg. Rep.*

Prof. Wilson says the chill which, as a rule, is present at the outset of an attack of pneumonia, often does not manifest itself in children, but is supplanted by nervous symptoms.

A NEW BLOODLESS OPERATION FOR THE EXCISION OF HÆMORRHOIDS, WITH HEALING BY FIRST INTENTION.

In the domain of surgery no field has been fought over more energetically in modern times than that which pertains to operations on the rectum, and particularly to the removal of that most important, because so common and distressing, ailment, hæmorrhoids. The most valorous determination to rescue its treatment from the uncertainties and vagaries of empiricism and to establish it on sound surgical principles has actuated the advocates of the various methods now in vogue.

Believing that a process of dealing with hæmorrhoids, evolved from my own conceptions after many years of contemplation and trial in devising means to harmlessly control hæmorrhage while excising the tumors and redundant folds of the rectum, and likewise to hold in perfect and undisturbed coaptation the edges of the incision, will receive favorable consideration from intelligent and unbiassed promoters of advanced surgery, I will, without further consumption of valuable time, enter *in medias res* with as little vexing of the polemics of the subject as possible

The following is the *modus operandi:* With a lateral or dorsal decubitus, as convenience or expediency may decide, and with an aseptic perineum and dilated sphincter, gently and smoothly clamp the base of the hæmorrhoids with suitable forceps, so as to parallel the approximated surfaces and free them from folds and other inequalities; then, having left room between the clamp and adjacent healthy tissues, apply on either side a sufficient length of rubber tubing five or six millimetres in diameter, with a lumen of one millimetre, and secure with aseptic catgut after the general manner of the quilled suture. To assure accuracy of adjustment, the pieces of tubing should be of the same length, and have corresponding marks six or eight millimetres apart, indicating the locations for the sutures. Each tube should have its extremities hermetically sealed by the sutures there tied, thus adding a degree of pneumatic elasticity to that possessed by the rubber. All the sutures should be preapplied or tied beforehand to one of the pieces of tubing, with threaded needles in each of the opposite loops, ready for transfixing the tissues and tying over the other piece of tubing. Remove the forceps, and excise the tumor close to the rubber tubing with flat scissors. I have sometimes varied the fixation of the tubing by using one piece doubled upon itself and drawn together with a continuous suture, made to assume an advancing figure of eight, or double spiral, by passing the needle always close to the forceps and the thread always encircling the tube from below upward; the perforations then are in one line and the tension evenly distributed. Where many stitches are to be taken, it saves the time consumed in tying. This completes a bloodless operation, for the elasticity of this welted suture supplies sufficient pressure to prevent all hæmorrhage, and maintains in perfect and uniform contact the margins of the wound without endangering from local asphyxic and necrotic conditions consequent to rigid clamping, and without interfering with the plastic exudation of repair by first intention.

The further dressing of the wound consists simply in passing a strip of moist borated gauze into the rectum, leaving an end protruding from the anus. The catgut sutures soften in due time and permit the tubing to pass away, while the flexibility of the latter has adapted itself to the environments, with the minimum of annoyance to the patient.

What the Esmarch bandage is to amputations, the same is this elastic quilled suture to the removal of hæmorrhoids or other angiomas from surfaces sufficiently lax to allow of approximating folds of sound tissue at their base. Compared with the ligature, it possesses all its advantages with none of the disadvantages attendant upon the distorted, puckered strangulation of the parts, followed by sloughing and ulcerative healing. The clamp and cautery also leave surfaces of crushed and lacerated tissue which the hot iron at best must transform into a burn of the second grade, with inevitable cicatricial contraction. Whitehead's operation is prolix, tedious, and wasteful of the vital fluid. The injection of carbolic acid is unreliable and precarious, save in expert hands, and even then we must wait for nature to expel the mummified mass and fill it with granulation before the cure is perfect. The accidents and lack of success that have been known to attend these various methods are apologetically attributed by their champions to unskilful hands. I feel confident that this new method will succeed with those who make no claim to extraordinary cleverness. It approaches the ideal of operative procedures, and attains the desiderata of all surgery, speedy and clean removal of the condemned part, economy of blood, and primary union.—H. M. Bishop, M.D., in *Ther. Gaz.*

MEDICAL NOTES.

Prof. Keen says the bacillus of tetanus is the most virulent of all known bacilli.

Chloral, Dr. Da Costa says, is a dangerous drug to administer to old drunkards.

Prof. Hare says the oil of copaiba is not as therapeutically active as the balsam of copaiba.

Appendicitis, Prof. Keen says, occurs about three times as often in the male sex as in the female.

Prof. Hare is of the opinion that some cases of pneumonia can be aborted if they are seen early enough.

Prof. Montgomery says lacerated perineums sewed up during the period of lactation often do not heal well.

Convulsions at the outset of pneumonia, Prof. Wilson says, are of very common occurrence in children, taking place in almost one half of all the cases.

According to Prof. Parvin, if after eighteen hours from time of delivery the mother does not voluntarily empty the bladder, she should be catheterized.

Prof. Parvin does not think that hamamelis is a safe remedy to administer to a woman in the treatment of hæmorrhoids, if she be in a pregnant condition.

For enlarged thyroid glands, Prof. Parvin recommends the local application of an ointment consisting of from twenty to thirty grains of the biniodide of mercury to half an ounce of simple ointment.

In any case of injury to the head in which a patient vomits blood, Prof. Keen says a fracture of the base of the skull will be found in nine out of every ten cases. The vomited blood will be blood that has trickled from the fracture and has been swallowed by the patient.—*Coll. and Clin. Rec.*

A Case of Transposition of the Viscera.—It occurs to me that the readers of the *Medical Record* might be interested in hearing of a rather unique case, at present in Lakeside Hospital, Cleveland, in which the positions of the internal viscera seem rather mixed.

John S., a German laborer, 25 years of age, entered the hospital about three weeks ago complaining of loss of appetite, weight, and strength. He had eight brothers and sisters, all of whom died while young, and he has always been delicate himself, and unable when a boy to knock around as his fellows did.

Upon examination, this unusual state of affairs was found: His heart is normal in size and correct in position, except that it is on the right side. The apex beat is in the fifth intercostal space, and one inch from the nipple, toward the median line; his liver is normal and in perfect position, except that it is on the left side; while his stomach seems to have changed places with his liver, and is on the right side. His spleen could not be made out.—H. J. Herrick, M.D.

Treatment of Vaginitis.—Lutaud (*Revue Obstétricale et Gynécologique*). The treatment of vaginitis differs little, whether it be simple or specific. The physician should, above all, consider the *acute* and *chronic* vaginitis in the therapeutical point of view.

(*a*) *Acute Stage.*—Here the speculum should not be employed. The patient should be kept as quiet as possible, and walking, coitus, and all physical exercise forbidden. Frequently repeated injections (every six hours) with Esmarch's douche with two litres of a one per cent. solution of boric acid. Emolient injections, such as starch, flax-seed meal, or decoction of poppy heads, may also be employed. If pain is severe, one of the following suppositories is given every evening:

℞—Ext. opii., ... centigm. i.
Ol. theobrom., ... gms. iv.
M.—Ft. supposit. No. 1.

This may be replaced by a little injection containing fifteen drops of laudanum. For bladder symptoms (tenesmus, pain during micturition), poultices, with laudanum sprinkled over them, bromide of potassium, emollient drinks, and alkaline diuretics are to be prescribed. It is well in these cases to discontinue wine, but light tea may be taken.

(*b*) *Chronic Stage.*—An injection three times a day is to be given with one of the following:

℞—Acid carbol., ... gms. v.
Alcohlis, ... gms. x.
Ess. thym., ... gtts. xx.
M.—For two quarts of water.

℞—Hydrarg. bichlor., . . centigms. xxv.
Acid. tartaric, . . . gm. 1.
M.—For two quarts of water.

℞—Potas. permanganat. . . . . gms. x.
Ac. dest., ... gms. cc.
M.—A tablespoonful for two quarts of water.

This last is the best remedy for gonorrhœal vaginitis; if it did not soil linen, it would be perfect. In rebellious cases, or when it is necessary to act rapidly, a Sims' speculum is introduced and the vagina is painted with a solution of nitrate of silver (two grammes in thirty grammes of water).

Before withdrawing the speculum, a large tampon imbibed with the following is introduced:

℞.—Acid. tannic, ... gms. ii.
Cocain. hydrochlorat, . . centigms. x.
Glycerini, ... gms. cxx.

The tampon should be left in place for two days. No matter what may be the treatment applied in chronic vaginitis, the cure may always be hastened by the vaginal dressings, which isolate the parts and absorb the secretions. Simple dry cotton tampons are good, but when made with iodoform or salol gauze are preferable.—*Annals of Gynæcology.*

THE CANADA LANCET.

A Monthly Journal of Medical and Surgical Science, Criticism and News.

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TORONTO, OCTOBER, 1894.

The LANCET has the Largest Circulation of any Medical Journal in Canada.

THE ONTARIO MEDICAL COUNCIL.

Since the return of the editorial "we" from a three months' sojourn in Europe, he has been looking over the columns of contemporary Ontario medical journals, with the result of his being impressed more than ever with the fact, that a very large storm may be compressed within the compass of a teapot. Judging from the number and quality of letters that have practically filled the editorial columns of some of our medical journals, the physician of Ontario needs a deal of enlightening in regard to his own interests.

But the most deplorable feature of the whole controversy is the small, personal, and bitter spirit infused into the communications. Farmers quarrelling over a line fence could not descend to more petty and unworthy arguments than have been used.

Is not the electorate sick unto death of the agitation carried on by a few wordy, loud-mouthed men who have a grievance; who wish to reform the Council by becoming, in some cases members of that much-abused body? The CANADA LANCET has let the matter severely alone, believing that the Council has done much, and is doing much, for medical education, for the protection of both the public and the profession, and for maintaining the dignity and honor of the profession. When this journal has spoken at all about the matter in question, it has always been in the most moderate terms, not holding that the Council has been either immaculate, or utterly debased and degraded, and unworthy the support of any honest man. That that body has made mistakes is clear, but they have, we believe, honestly done their best, according to their light, to fulfil the purpose for which the Medical Council was originally created. That there have been cliques and rings in that body; that in order to have weight and carry any measure to a successful issue, a man must either honestly or otherwise belong to, or have some connection with those cliques, is unfortunately too true. Committees, vice-presidencies, presidencies, the subsidizing of a journal, *et al.*, have been cut and dried before, and in many cases long before, the Council met, and those who kept out of cliques were not in it, so far as anything their vote was worth. We have called the attention of the Council and the profession to those facts before; and from all the signs, which we think are pregnant with deep meaning, that useful body is now about to reap the whirlwind.

The screed which appears in *The Farmer's Sun* we shall only notice so far as to say that the only University graduate we know capable of such "a caustic arraignment," as he modestly puts it, is one who has been disciplined by the Council for bare-faced quackery, so that his grief and wailings will not make much difference to any one. But we sympathize with the gentle soul which is suffering such agonizing pains on account of too much loyalty to mankind and to principle. John Hampden was commonplace beside this hero.

It is a matter of congratulation to all Toronto practitioners that we have two such men to represent us as Drs. Barrick and Machell. No better men could have been found, and whatever may be the fate of the incoming Council we may be certain that Toronto will be represented with dignity and integrity. We are also glad there are to be no elections in this city. Not a little personal feeling has been keeping these constituencies warm for the past few years in connection with Council work. Men will not always do what is expected of them, and they will sometimes even work dead against those who send them to offices of honor. So now that we have practically the two best men to be got, elected by acclamation, those heart burnings will surely die out, and we shall hear less abuse of various of our fellow-practitioners.

From the list published in another colu-

will be seen that in only nine of the seventeen divisions is there to be any contest. While we do not, as is manifest from our stand ever since the Defence Association came into existence, endorse wholly the old Council, we have no hesitation in saying that, in our opinion, the interest, honor and dignity of the profession, and the weal of the public, will be safer in the hands of that body than in those of the agitators who have, we think, brought about a serious condition of affairs, perhaps a dead-lock, for what appear to us to be utterly inadequate reasons.

THE HEALING ART IN PALESTINE.

In a letter recently received from Rev. Dr. C. A. Webster by one of his friends in Toronto, he details in an amusing way some of the difficulties that attend the practice of the healing art among the natives of Palestine where his duties are performed. He says :—"A physician meets out here in Palestine just the same diseases as at home. Some of them are slightly modified in symptoms and course, but as yet I have seen very little difference. In winter, pneumonia, bronchitis, pleurisy, rheumatism are the commonest of ills, and in summer, from the wretched sanitary and dietetic habits, fevers and gastro-intestinal troubles prevail. Typhoid is nearly always present, measles very common, but scarlet fever almost unknown, and small-pox is as common as any. The disease is not nearly so fatal here as in America, and is made light of. It is quite a common thing to see children in the street playing about with a full crop of small-pox pustules on the face, just blooming with it. What a fright that would cause in our good old fossil town of ———! But medical work in this country is very trying and discouraging, and good results are often frustrated by the ignorance of the people. For example, either the patient himself or his friends will often take off splints applied for fractures, and bandages and dressings after the most serious operations where the best antiseptic work has been done; just strip off everything and perhaps put on in their place a lot of dirty cloths. I saw a young lad of ten or twelve years a few days before I left Haifa, who had a fractured jaw from a kick from a donkey (which by the way he was teasing). I placed the fragments in position and applied splints. The next time I came, everything had been taken off to show some of the neighbors what had happened to the boy! Just fancy! But I was mad! That is a most common occurrence. One cannot depend upon dressings or splints being kept on two hours after they have been applied. Not long ago I had a case of gangrenous ulcer, a most foul and loathsome thing. After cutting away all dead tissue, and applying the costliest antiseptic dressings, the next time I came back to dress the wound I found everything taken off and a bit of dough put on in its place, and was gently told that we 'Franjies' (foreigners) did not understand native diseases; and again I was mad,—but what was the use?

"Before leaving Haifa I had a case of typhoid fever, and the friends of the patient were enraged and threatening to have me arrested for malpractice and dreadful cruelty, because I prohibited them from giving him to eat Arab bread, green apples, and raw cucumbers! That is a fact, and it was only by using personal violence that I could keep them from it. Still, these people may not be so very far behind us after all. I can remember quite well among the good people of the old Mitchell Road, near our old home, how they used to believe that a black cat cloven in two and applied to an ulcer, was a sure cure; a white hen split up and applied to a peritonitis was an unfailing remedy, and red silk never failed to charm away erysipelas. Yes, and there are some among them who are still of the old faith. So we must take this people just as we find them, and try to teach them better. But it requires inexhaustible patience, and a temper and disposition as smooth as polished ebony. That is what we have come here for, but now and then one has to get mad and abuse them up and down. It is a great satisfaction to one's self after long pent up feelings of anger and disgust, and it has a good, moral, wholesome influence both upon Jew and Gentile here."

We, in Ontario, can heartily sympathize with the physician so placed, for, indeed, human nature and human ignorance, so far as the doctor is concerned, are the same in kind, and practically the same in degree, in many instances, in Jericho as in Toronto. When men of the presumed intelligence and ability of the Patron leaders here can

be bamboozled by a few designing and disgruntled medical men into taking up a quarrel which in no sense concerns them, and announcing as a plank of their platform, their intention of preventing medical men from dealing themselves with flagrant offences against the code of ethics, there would seem to be but little difference between the boasted "bone and sinew" of this country and the beggarly "masses" of effete monarchies in the East.

INCREASE OF LUNACY.

The subject of the increase of lunacy is one of deep interest to every one, but more especially to the members of the medical profession. It is easy to say that nature is constantly adapting herself to our changed conditions and environment and that the human race is in a better physical state to-day than ever before. But the recent, forty-eighth report of the British Commissioners on Lunacy shows an increase of 2,245 persons coming under the category of lunatics, idiots, and persons of unsound mind. This is the largest increase in the number of lunatics yet reported. The report goes on to say: "This large increase calls the more for some special consideration, because it follows an increase of 1,974 in the preceding year, that being far above the average for the ten years 1882 to 1892, which was only 1,300. The increase seems to have been fairly general throughout England and Wales, but the predominant feature of the figures is the great increase shown in the County of London, its pauper lunatics numbering on January 1st, 800 more than they did a year previously. It is perhaps right in this connection to point out that from the administrative County of Middlesex, which is fast becoming metropolitan, there is shown from last year an excessive increase of 103, against an average for the previous ten years of 42."

There are some considerations which must be taken as an offset to the very gloomy outlook as shown by the above-mentioned report. Thus it appears that the greatly improved treatment of insanity in the past two decades, and a greater willingness of the public to enter asylums, has succeeded, on the one hand in keeping alive numbers who under less favorable conditions would have died; thus increasing the numbers showing in reports; and, on the other hand, bringing to light many cases which were formerly kept concealed by relatives and friends, which also would increase the reported numbers. Again, the increase in population has something to do with increase in the number of lunatics, though we are not aware that the former is keeping pace with the latter. So much has been said by both the medical and lay press during the past few years, and the general mind having been pretty well made up on the subject, it is encouraging to find any reasons, such as those above cited, to show that the increase is not so rapid as might at the first consideration be supposed, and that the nations as nations are not becoming insane.

THE SEVENTH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

This live society met for the current year in Toronto. It sessions were held in the Medical Council Chamber, on the 19th, 20th and 21st of Sept., and both scientifically and socially the gathering was a pronounced success. With Dr. G. H. Robé as President, and Dr. William Warren Potter as Secretary, it goes without saying that a programme calculated to bring out excellent work had been perfected in every detail, and with a very full attendance of the fellows, success was assured. The subjects taken up were varied and full of interest, and the discussions to which they gave rise were, as a rule, well sustained.

A most cordial invitation to attend was extended to the profession of this city and province, and this was largely taken advantage of. The listener could not but recognize that he was in the presence of a set of earnest and progressive scientists, men who have taken no inconsiderable part in the evolution of Gynæcology, in transforming it from a routine of palliative topical applications and pessary adjustments, to the most advanced and most beneficent of all the specialties. Many of those present were men of more than American reputation, and their handling of "Appendicitis," of "Perineal Operations," of "The Abdominal Incision," and of "Intestinal Anastomosis," was strong, rich and sometimes masterly.

It is but just to say that the resident Fellows had made ample provision for the entertainment of their guests. Under the influence of the hospitality extended, the visitors were not slow in declaring this to be an ideal city and their stay here to have been pleasurable in the extreme.

Poisoning by Guaiacol.—

Prof. Oscar Wyss, (*Deutsche Medicinshe Wochenschrift*), cites the first fatal case of guaiacol poisoning and directs attention to the toxic symptoms as follows:—

A girl nine years of age, who had been accidentally given 5 c.c. (75 drops) of guaiacol. In a short time she became unconscious; the conjunctivæ became injected, the corneal reflexes diminished and the pupils no longer reacted to light; there were frequent attempts at vomiting and the saliva flowed from the mouth in large quantities. The pulse became rapid, the sensibility of the skin much diminished. Finally the patient began to vomit; the physician detected the odor of guaiacol. The stomach was washed out, but she did not rally. The cyanosis gradually diminished, and instead of it a deadly pallor was observed; the respiration became frequent. Three and a half hours after the guaiacol had been swallowed the patient passed 100 c.c. of brownish-red urine.

The spleen and liver soon enlarged, and the temperature fell to 35.5°C. (96°F.) and small hemorrhages were observed upon the skin of the arms and legs. The urine contained albumen, blood and casts, and Ehrlich's carbolic acid test was positive.

Jaundice soon appeared, the stupor increased and the patient died on the third day.

The autopsy revealed an acute gastritis and enteritis, parenchymatous degeneration of the liver, acute hæmorrhagic nephritis, parenchymatous degeneration of the heart muscle, and ecchymoses in the pleura, peritoneum, endocardium and pericardium. The spleen was much enlarged. Kobert in his text-book on "Intoxicationen" points out that after one gram (15 drops) doses of guaiacol slight appearances of poisoning may supervene. These are characterized by a burning feeling in the stomach, nausea, etc. In one case in which fifteen grams, (three and two-third drachms) were accidentally taken by a patient in the Dorpat Clinic, the stomach was immediately washed out and the patient was rescued. However, unconsciousness set in, the pupils became contracted, the breathing irregular and the intensely dark appearance of the urine was very noticeable.

The Diarrhœa of Typhoid.—In the Cavendish lecture delivered in London by Sir William H. Broadbent, the author gives a great many very useful points in the treatment of typhoid, *Med. Press*. His remarks on the diarrhœa, due to septic processes, are very happy. They are in abstract as follows: "One of the effects of septic processes in the intestine is diarrhœa, which may be recognized by the offensive smell of the evacuations, differing from that of the typhoid stools. The color is often dark and not unfrequently the consistence is watery with brown particles or flakes in suspension, quite unlike the pea-soup typhoid stools. The abdomen at the same time is often distended with gas, and the temperature may be considerably raised by absorption of septic products. Diarrhœa caused in this way is most frequent early in the disease and is most frequent in patients who have indulged in alcohol or in excess of food. It may also be due to continued consumption of solid food after the fever has set in. The treatment I have found most efficacious in diarrhœa, due to sepsis of the intestinal contents, is the administration of perchloride of mercury, which I have usually given in doses of one drachm of the solution with one grain of quinine every three or four hours for twenty-four or forty-eight hours. Calomel in repeated small doses of one-third of a grain every three or four hours is equally effectual; the diarrhœa has almost always, in my experience, been checked, the abdomen subsiding and the temperature falling one or two degrees. The entire aspect of the case is usually changed. So favorable has the effect of the perchloride been that I have often been induced to continue its administration in small doses of half a drachm three times a day through a great part of the fever. A common practice in Germany is to initiate the treatment of a case of typhoid fever by two or three grains of calomel on two successive days. Without going so far as to recommend this, I think it would prevent

diarrhœa such as I have just described, and at the outset of the attack a single dose would probably be beneficial in most cases. More formidable than local irritation are the effects on the nervous system of absorbed products. Other bacteria besides the typhoid bacillus may effect an entry into the blood through the lesions in Peyer's patches, but it is the ptomaines formed by their activity in the alimentary canal which constitute the poisons. Sometimes with diarrhœa of the kind just described, with high temperature and tumid abdomen early in the disease, there is either wild, maniacal delirium or great stupor and heaviness. The good effects of the employment of the perchloride of mercury or calomel are frequently seen in the mitigation of the nervous symptoms as well as in the alleviation of the intestinal irritation."

The diarrhœa caused by undigested or irritating food he, of course, deals with very differently, viz., by stopping the food which is acting as an irritant and substituting some other form of nourishment, or, in the case of milk, by peptonization, or by the addition of lime water or soda water. He holds that the physician should see every stool, or, at least, one motion each day.

THE STARTING-POINTS OF TUBERCULOUS DISEASE IN CHILDREN.—In an extremely interesting and useful paper by Dr. J. Walter Carr, in *The Lancet*, the author calls attention to the following points which, while they are generally recognized by our physicians, may yet be emphasized with benefit to us all. Their extreme importance will be noted by every one who has anything to do with children. The paper is the result of the records of 120 autopsies made at the Victoria Hospital, Chelsea, upon tuberculous children, and in whom no less than 82 per cent. showed more or less generalization of the disease. He sums up his paper as follows:—1. That tuberculous disease in children commences usually in the glands, the liability being at its maximum during infancy and early childhood, and rapidly decreasing in later childhood. That caseous glands, especially the internal ones, may *(a)* remain quiescent for an indefinite period; *(b)* start tuberculous mischief in adjacent parts, especially the lungs, by direct extension; and *(c)* set up general miliary tuberculosis. 2. That the internal glands, at any rate, are probably most often infected directly from the organ with which they are connected, although the possibility of infection through the blood-stream must not be forgotten. 3. That tuberculous disease starts much more frequently in the thorax than in the abdomen, and certainly far more often in the thoracic than in the mesenteric glands. This does not throw any doubt upon milk as a possible source of tuberculous disease, but this does not seem to be by any means a frequent mode of infection as compared with that through the lungs. At the same time the importance attached by Dr. Woodhead, on the basis of his statistics, to the mesenteric glands, indicates the necessity of a further and prolonged investigation of the pathological evidence, not in one place only, but in all parts of the country—for the conditions producing tuberculous disease may vary materially in different localities. 4. That glandular disease may often exist alone and quite unsuspected; in very many cases, doubtless, it is quite impossible of diagnosis. 5. But, after all, by far the most important treatment is the prophylactic. Whether the glands get infected directly through the lymphatic channels or indirectly through the blood-stream, the organisms must in every case have passed in through the mucous membrane, and through a healthy one they probably cannot penetrate. We have, therefore, to try to prevent gastro-intestinal and respiratory catarrhs, and especially to avoid their becoming chronic; to deal promptly with, and if possible prevent, rickets, the great cause of such catarrhs in early childhood; and to take especial care of children during convalescence from measles, whooping-cough, and other acute specific diseases, so liable to depress the vitality of the body generally, and the resistant power of the mucous membranes, as well as the filtering power of the glands, in particular.

ADVICE AS TO STIMULANTS.—In a very interesting work, by Dr. Geo. Herschell, of London, called "Health troubles of City Life," the writer says: "Stimulants never increase the natural capacity of the brain. They can only abstract for the purpose of work in hand some of the energies which are sorely needed to repair and restore a brain which has already been taxed to

the furthest limit which is consistent with health. To remove the sense of fatigue caused by overwork by the consumption of alcohol, is to close one's ears to the voice of nature. The weariness of the brain is a protest against further exertion until recuperation has been obtained by rest; and if the weary feeling is deadened or destroyed by adventitious means, nature will exact her penalty. When the overworked man of business having been on his legs all day, and feeling fit to drop, with a sensation of 'all-goneness' about the region of the stomach, rouses himself with whatever he is in the habit of taking, be it whiskey, champagne, or even tea or coffee, he does not add one atom of force to his stock of energy, although he fancies he does, but having put to sleep his sense of weariness, simply appropriates some of his reserve for the present necessity. He has accepted a bill at a short date to which a ruinous rate of interest is attached, and his resources will not allow him to make many repetitions of the experiment. His account at the bank of life will soon be overdrawn. Alcohol cannot add one iota to his reserve of nervous energy, but it may delude him into exhausting it. The busy man should once for all rid himself of this fancy that he can create by artificial means, an abnormal store of brain-power. He cannot enlarge the limits which nature has set up."

THE EFFECTS OF QUININE ON PREGNANCY.—A collective investigation of this subject has been recently undertaken, with these conclusions, *Med. Chir. Rev.*: 1. The existence of pregnancy is no bar to the administration of quinine. 2. For fevers and other affections during pregnancy, in which quinine is indicated, the effects of the drug are more marked than those of any other. 3. That abortion following the administration of quinine is either the result of the original malady or the effect of idiosyncrasy. 4. That allowing for an idiosyncrasy, in cases in which a tendency to abortion exists, and in others as a matter of precaution, quinine is best administered combined with a sedative (opium). 5. Hence the old-standing view of the action of quinine on the duration of pregnancy is not borne out by the clinical experience collected in the replies. This view has been held by many of our best known Canadian physicians for years, yet we hear occasionally a man of the old school say he would not use quinine during pregnancy. In our opinion, the drug would not be so likely to produce evil results as would the fever, malaria, or other poison for it would naturally be given.

CHOLERA IN EUROPE.—The latest official reports, as well as the reports received through the various news agencies, go to show that the Asiatic pest is still to the fore in Europe, and that the danger is by no means past. It prevails over a large extent of Russia, being particularly active in St. Petersburg. Southern Russia also has many new cases. In North-Eastern Prussia many cases have appeared. Belgium has shown a good many cases. Turkey numbers them by the thousand, the Netherlands, Galicia and other provinces are feeling the scourge. During the first week of September *The Lancet* reports 5,518 cases, with 2,456 deaths in European Russia alone. Fortunately for us on this continent, Great Britain has remained free, though we are by no means safe with so many centres of infection spread over Europa.

INTERNAL USE OF ANTISEPTICS.—Recently, in *Vratch*, Dr. Triwousse took a strong stand against internal antiseptic treatment, which he asserts is "not only useless, but positively injurious under certain circumstances, especially in cholera." He further calls attention to the fact that certain microbes, especially those accredited to cholera and typhoid fever, when taken into the human economy, largely lose their virulence, and are able to re-acquire the same only by passing through water, air, soil, etc.; and that at the time when we observe these diseases the microbes and other toxines are no longer dangerous. This is good practical common sense.—*Ex.*

And yet, what is calomel, or rather the bichloride into which it is no doubt changed in passing through the stomach, but an antiseptic, from which we have all seen good results, not only as a cholagogue but as a disinfectant.

CANDIDATES FOR ELECTION TO THE ONTARIO MEDICAL COUNCIL.—The following list of candidates is, we believe, correct:—No. 1, Dr. Bray, Chatham, and Dr. Samson, Windsor; No. 2, Dr. Williams, Ingersoll; No. 3, Dr. Roome, London; No. 4, Dr. Graham, Brussels; No. 5, Dr. Brock,

Guelph; No. 6, Drs. Henry and Smith, Orangeville; No. 7, Dr. G. Shaw, Hamilton, and Dr. Heggie, Bramptom; No. 8, Dr. D. L. Philip, Brantford, and Dr. J. Armour, St. Catharines; No. 9, Dr. Law, Beeton, and Dr. Hanby, Waubashene; No. 10, Dr. Barrick, Toronto; No. 11, Dr. Machell, Toronto; No. 12, Dr. Sangster, Port Perry, and Dr. Cotton, Lambton Mills; No. 13, Dr. McLaughlin, Bowmanville; No. 14, Dr. Ruttan, Napanee; No. 15, Dr. Spankie and Dr. Dickson, Kingston; No. 16, Dr. Preston, Newboro', and Dr. Reddick, Winchester; No. 17, Dr. Rogers, Ottawa, and Dr. Bergin, Cornwall.

THE USE OF GLYCERINE IN HEPATIC COLIC.—*L'Union Médicale* states that Ferrand reports favorable results obtained by him in the treatment of hepatic colic by glycerine. The glycerine is administered by the stomach, and he believes is rapidly taken up by the hepatic vessels. He says it exercises a distinct cholagogue influence, and tends to prevent hepatic colic. Should an attack of colic come on, a large dose, from ½ to 1 ounce of glycerine—should be administered. Ordinarily 1 to 3 drachms of glycerine each day, taken with alkaline water, is quite sufficient to prevent future attacks.

MANAGEMENT OF SCIATICA.—Doctor Benj. H. Brodnax declares, *Med. Age*, he obtains almost instant relief in sciatica, from the hypodermatic injection of five to ten minims of a solution of twenty drops of carbolic acid to the ounce of water. He recommends the injection being carried down to the seat of pain.

FRECKLES.—A paragraph seasonably going the round of our exchanges attributes to Hager the assertion that freckles can be removed by the application, every other day, of an ointment composed of white precipitate and subnitrate of bismuth, each one drachm; glycerine ointment, half an ounce.

PROPHYLACTIC AGAINST RECURRENT TONSILLITIS.—*Therap. Bältter*—

℞—Acidi carbolici	gr. lxxii.
Spiritus tenuoris	ʒ iij.
Olei menthæ piperitæ . . .	♏ i.

Ten drops in a cupful of warm water; used as a gargle morning and evening.

PRACTICAL ADVICE.—A young medical man, says Jacbi, who runs off into a specialty, honestly believing that a human organ can be studied and treated separately like the wheel of a watch, has not intellect enough to be a physician, and ought to have been discouraged from entering the ranks.

BORIC ACID IN CONJUNCTIVITIS.—*American Medico-Surg. Bulletin*—

℞—Acidi borici	gr. iv.
Sodii boratis	gr. xii.
Aq. dest.	ʒ i.

Fiat collyrium.

ELECTRICAL TREATMENT OF RED NOSES.—Dr. Helling, *Med. Rec.*, says that a red nose is due to contraction of the arterioles and dilatation of the veinlets. He claims to have cured a number of cases by the application of a continuous current of moderate intensity for five to ten minutes daily.

LOCAL ANÆSTHESIA.—A mixture of ten parts of chloroform, fifteen parts of ether, and one part of menthol, used as a spray, is recommended, *Med. Age*, as an excellent and prompt means for obtaining local anæsthesia lasting for about five minutes.

UNEQUAL DILATATION OF THE PUPILS is regarded by Dentage as a sign of great value in the diagnosis of pulmonary tuberculosis. It is present, he says, in the majority of cases of this disease.

THE police of New York say there are about ten thousand opium smokers in that city.

Books and Pamphlets.

AN AMERICAN TEXT-BOOK OF GYNÆCOLOGY, Medical and Surgical, for the use of Students and Practitioners. By Henry T. Byford, M.D., John M. Baldy, M.D., Edwin Cragin, M.D., J. H. Etheridge, M.D., William Goodell, M.D., Howard A. Kelly, M.D., Florian Krug, M.D., E. E. Montgomery, M.D., William R. Pryor, M.D., George M. Tuttle, M.D. Edited by J. M. Baldy, M.D. A royal 8vo volume, with 360 illustrations in text and 37 colored and half-tone plates. Cloth, $6.00; sheep, $7.00; half Russia, $8.00. Philadelphia: W. B. Saunders. 1894.

This is a beautifully printed book. The illustrations are very numerous and exceedingly well executed. Indeed they are meant mainly to

illustrate the text, all anatomical descriptions except what are essential being omitted. The method of dealing with each disease is clear, doubtful points being left for the most part alone, although the most important of the moot points are noted and explained. The list of names given above is a sufficient guarantee as to the usefulness of the work, comprising as it does the most noted among the gynæcologists of America, the birthplace of that art. The chapters on Technique and After-treatment will be of special value to students, laying down as they do the latest and most approved methods of preparation of the operator, assistants and nurses, and the patient for all operations; the best methods of preparation of disinfection of sponges, ligatures, instruments, etc.; and, in a word, all necessary technique.

In the chapter on After-treatment, feeding, drinking, management of the bowels, bladder, hernia, etc., have been taken up in detail.

The work is said to embody as nearly as possible the combined opinions of the authors, the editor having striven to render all the statements as uniform as possible. Gynæcology has made such rapid strides in the past ten years, that readers, both students and practising physicians, will welcome the book, which appears to be all that can be desired on the subject.

ATTFIELD'S CHEMISTRY: Chemistry, General, Medical and Pharmaceutical; including the Chemistry of the U. S. Pharmacopœia. A Manual of the General Principles of the Science, and their application to Medicine and Pharmacy. By John Attfield, M.A., Ph.D., F.I.C., F.C.S., F.R.S., etc., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, etc. Fourteenth edition, specially revised by the author for America to accord with the new United States Pharmacopœia. In one royal 12mo. volume of 794 pages, with 88 illustrations. Cloth, $2.75; leather, $3.25. Philadelphia: Lea Brothers & Co., 1894. Toronto: Carveth & Co.

This book which has been so justly popular, as is shown by the number of its editions, comes to hand just in time for the medical students of '94 and '95. The work supplies all that is necessary for students of medicine and pharmacy, as well as physicians and pharmacists. It is so well known that no commendatory notice from us is necessary; but we would like to express our admiration for the arrangement of the subject, for the clearness and conciseness of definition especially in organic chemistry that *bête noire* of the student, and for the excellent series of test questions running through the work. Nothing more perfect or complete as a text book has come in our way.

SAUNDERS' QUESTION COMPENDS, No. 14.—Part I. Essentials of Refraction and the Diseases of the Eye. By Edward Jackson, A.M., M.D. Part II. Essentials of Diseases of the Nose and Throat. By E. B. Gleason, S.B., M.D. Second edition, revised, illustrated. Crown 8vo. Cloth. 1894. Philadelphia: W. B. Saunders. Price, $1.00.

Many deny the use of Quiz's altogether, forgetting that they are not intended to replace the larger text books, but are designed to assist the over-taxed student in keeping in mind the more important points in connection with the subject of which they treat. This series has certainly been a great boon to students preparing for examinations, where properly used.

BULLETIN OF THE JOHN HOPKINS' HOSPITAL, Baltimore, June-July, 1894. Vol. V., No. 41, containing the following:

I. The Significance of Albuminuric Retinitis in Pregnancy, by Robert L. Randolph, M.D. II. An Operating Table, by Hunter Robb, M.D. III. Primary Carcinoma of the Gall-Bladder, by Delano Ames, M.D. IV. Proceedings of the Hospital Medical Society.

PRACTICAL APPLICATION OF PRINCIPLES OF STERILIZATION. By Hunter Robb, M.D., Associate Gynæcology, Johns Hopkins University, Baltimore. Reprinted from American Journal of Obstetrics, Vol. XXX, No. 1. 1894. Wm. Ward & Co.

NOTES ON GYNÆCOLOGICAL TECHNIQUE. By Hunter Robb, M.D. Reprinted from the New York Journal of Gynæcology and Obstetrics, May, 1894.

EUROPHEN in an ointment gives excellent results in tertiary syphilitic eruptions, in parasitic scalp diseases, in chronic eczema and in venereal ulcers.

Morphine and hydrocyanic acid or cyanide of potassium are incompatible.

THE CANADA LANCET.

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

Original Communications.

TREATMENT OF PLACENTA PRÆVIA.

BY J. ALGERNON TEMPLE,

Prof. of Obstetrics and Gynecology, Trinity Medical College.

Acceeding to the request of the President, I appear before you to-day, to open the discussion this year on Obstetrics; as you are all well aware it has been our custom for many years past to appoint some one to open the discussion on each one of the chief branches of Medical Science. Unfortunately for myself, but still more for you, I have been selected as one of those to lay before you some obstetrical subject.

On looking over the subjects selected in previous years; I find that "placenta prævia" has never been chosen. The disease is one of not uncommon occurrence, while at the same time it is one of very great importance, and is just as liable to be met with by the youngest practitioner as the most experienced. I have therefore selected the "Treatment of Placenta Prævia." The subject is too extensive to deal with in its entirety and the time allowed by the Association is also too short, even if I thought of doing so; however, the treatment ought to afford material for discussion.

It is only expected of me to lay before you some text for discussion, I am not expected to enter into any theory of my own or of any one else, consequently I will be as brief as I can; merely outlining the treatment as advanced to-day by the most experienced writers; in other words the common practice of to-day.

In the discussion that will follow I hope if any one present has anything better to put forward, anything he has found more useful, he will give us the benefit of his experience, so that we may be able to profit by his work, and in this manner it appears to me our Association must bring forth good practical results. For my own part I have nothing new to advance; I have followed in the beaten path of my predecessors and have had good results in my own practice, but I am ready to learn, and will gladly receive from any fellow practitioner any practical hint that will serve me, when in attendance on so anxious a case as one of placenta prævia.

In looking over the literature of this subject for the past century, it may not be uninteresting to make a few selections from some of the prominent writers on the subject: as a matter of comparison, just to see what progress we have made. In 1733, Chapman, writing on placenta prævia, recommends: that on the first attack of hæmorrhage, the woman should be at once delivered by art; as her future progress in gestation is accompanied by great risk to herself. Pergoz advises: that gestation should not be interfered with by art, "but that we should always wait for the natural labor pains," which he goes on to remark will put a safe end to the gestation.

Rigby, writing in 1789, says: hæmorrhage occurring in the early months of gestation is not serious to the woman; he considers interference with gestation to be unnecessary, and in another place he remarks: "Were it even necessary to interfere with gestation, I cannot conceive it possible even how to do so." Rigby did not believe then in the original fixation of the placenta at the os uteri; that when found there, it was the result of an accident, which had caused its dislodgment from its original site at the fundus, and that it had fallen or gradually slipped to the lower end of the uterus and there formed new attachments for itself.

In support of this theory he quotes Mauriceau, Portal, La Modé, Dioniss, Ruysch, Deventer, Giffard and others.

Smellie appears to have been the first author to admit the possibility of placenta prævia as a primary occurrence; in dealing with the treatment of hæmorrhage, he recommends the entire separation of the placenta, the rupture of the membranes and the delivery of the placenta first. This treatment for many years fell into disuse, but was again revived by the late Sir J. Y. Simpson, though there are some who credit him as being the originator of this plan of treatment.

As early as 1776, Leroux advocated in those

cases of hæmorrhage occurring with placenta prævia and the os uteri undilated, that the vagina should be firmly packed with tampons of lint soaked in vinegar.

The famous Blundell, writing in 1815, says, "that hæmorrhage in placenta prævia usually occurs between the 7th and 8th month."

That in cases where the os uteri is dilated the best plan in the interest of both mother and child is to turn; and where not dilated, to wait till it attains the size of half a crown, and then to turn. And when the os is too rigid for the safe passage of the hand to turn, to puncture the membranes through the placenta, being very careful not to detach it. Again in central placenta prævia he recommended the perforation of the placenta through the centre rather than its lateral detachment. Dewees, in 1837, advises, before dilatation of the os uteri, rest in bed, and if the pulse be strong and full, a free general bleeding from the arm, and the internal administration of large doses of acetate of lead, and cold applications to the vulva and lower part of the abdomen, and also rectal injections of ʒjs. of acetate of lead every hour to promote congelation of the blood.

Hok recommended cold astringent vaginal injections, vaginal tampons of lint soaked in alum or wine and alum.

Such is a brief outline of the treatment adopted during the past hundred years.

This brings us now to the consideration of the treatment as practiced in our own time.

Of all the men who have written on this important subject, I think we are most indebted to Robert Barnes; for the introduction of the separation of the placenta from the lower cervical zone of the uterus, or, as he calls it, the unsafe attachment of the placenta. Also to Branton Hicks, who taught us how to perform version by the bi-polar method, before the dilation of the cervix.

These two methods have enormously reduced both maternal and fœtal mortality. In treating a case of placenta prævia, the very first question that forces itself upon us is: to decide as to the advisability or otherwise of endeavoring to prolong the gestation. Undoubtedly, in all cases of labour it is the duty of the accoucheur to endeavor, if possible, not only to save the mother's life, but also to give every chance to the child.

I must admit that in all cases where both the mother's and child's life are in peril, I give the greatest chance to the mother, as her life, I consider, is of far more importance than that of the unborn child. The question is one of the greatest importance, and one that deserves the most careful consideration at the hands of the attending physician.

The best line of treatment to be adopted is not altogether a settled one. There are some who advise the immediate termination of the gestation on account of the great risk to the mother's life; and there are others who advise temporizing in the interests of the child.

I do not think any absolute hard and fast rule can be laid down, as each case may possibly present some special feature, calling for some special line of treatment. At the same time I think the weight of evidence is in favor of the termination of the gestation, when the first attack of hæmorrhage, especially if it be a severe one, occurs before the 7th month; for the following reasons:

Firstly, The supposition is in favor of the placenta being centrally implanted when the first attack of flooding is severe, prior to the 7th month.

Secondly, The tendency of such cases is of themselves to end in abortion and consequent death of the child.

Thirdly, When the hæmorrhage occurs, even in the latter half of gestation, the tendency is towards abortion. It is estimated that one-third of all such cases only reach the end of gestation.

Fourthly, The liability to a recurrence of the hæmorrhage at any moment is very great; consequently, the woman's life is hourly in danger. The great fatality from placenta prævia is in the occurrence of sudden hæmorrhage in the absence of the physician. The first attack is usually slight but it should be taken as a serious warning to us of the possibility of the next attack being a very severe, if not a fatal one, before assistance can be got. The occurrence of hæmorrhage in the early months of gestation so reduces the chances of saving the child's life, that I do not think its welfare ought to be considered at all alongside of the mother.

I believe, certainly, that the wisdom of prolongation of gestation is open to serious question. I, should the first attack of hæmorrhage occur after the viable period of the child, then do not think

there should be any hesitation in the mind of the physician as to what he should do for his patient, as I am thoroughly satisfied from my own experience that the correct thing to do is to terminate the gestation as soon as possible. By so doing the child and mother both have a much better chance of ultimate recovery.

To delay is to increase both maternal and fœtal mortality. On this point let me here quote the words of Robert Barnes, "If the pregnancy have advanced beyond the 7th month, it will, as a general rule, I think, be wise to proceed to delivery, for the next hæmorrhage may be fatal; we cannot tell the time or extent of its occurrence, and when it occurs, all, perhaps, that we shall have the opportunity of doing will be to regret that we did not act when we had the chance."

These are very significant words from a man of vast and varied experience. The few cases where it may be deemed advisable to prolong gestation in the interests of the child, should present some, if not all, of the following features:—1st, The woman be very near the 7th month of pregnancy. 2nd, The first attack of hæmorrhage be but a slight one. 3rd, The placenta be but laterally implanted. 4th, The woman be within easy reach of medical assistance.

Under such conditions the patient should be put to bed, kept absolutely quiet, free from all surrounding excitement and possibly given an occasional dose of opium. I do not think there is any virtue in the so-called astringents, such as acetate of lead, gallic acid, etc. My own practice is even under these circumstances, not to advise the attempted prolongation of pregnancy; the risks to the mother are too great, and the chances of saving the child's life too small. Presuming the case to be one occurring after the 7th month, the attack of hæmorrhage to be a severe one, and the cervix to be undilated, delivery should be accomplished as soon as possible.

For this purpose I would advise the membranes to be ruptured; this allows the uterus to contract and will of itself frequently be sufficient to check the further loss of blood. The objections raised against this plan of treatment are that the normal means for dilating the cervix is removed and that the chances against the child's living are increased. Still it is the quickest way of securing rapid contraction, and thus stop further loss of blood.

If the flooding continues and the os be not sufficiently dilated to admit of version readily, and especially if the patient is much exhausted and not in a fit state to admit of version, the next best step is to separate the placenta by the finger from around the cervix as far as the finger will reach; as recommended by Robert Barnes. This as a rule answers promptly. It both checks further loss of blood and it also favors dilatation of the cervix; for so long as the placenta retains its attachments to the lower zone of the uterus the cervix will not readily ditate. The internal administration of ergot may be started from the first. In the event of these means failing, and the flooding still continues and the cervix is still too undilated to admit of version, plugging the viagina firmly with antiseptic tampons should be resorted to.

Before plugging, the vagina should be well syringed out with an antiseptic lotion; this method if properly applied is very efficient, the plugs, however, must be inserted carefully, one after another, the first one should be placed within the cervix itself, and then the others in rotation till the the vagina is perfectly full. The plugs may be made of clean strips of cotton or wool, previously soaked in some antiseptic. On no occasion should a sponge be used which has been in use in the house for other purposes. After the vagina has been carefully packed a firm pad should be placed over the uterus and the whole kept in position by a carefully, well-applied bandage. The tampons should not be left in longer than eight hours and when removed the vagina should again be syringed out.

Lastly, if on the removal of the plugs the os be found sufficiently dilated to perform version and the woman herself be in a fit state for the operation, it should be done. The bi-polar method being used, if possible, the leg of the child will form another efficient plug and further assist in dilating the cervix. The operation of version by the bi-polar method may be undertaken at any time in the course of the treatment, whenever the cervix will permit of it. In Berlin it is claimed that by this method of treatment the mortality of women has been reduced to 69½ per cent. and of children to 60 per cent. A marvellous reduction as compared to what it used to be.

THE TREATMENT OF HERNIA.*

BY ALEXANDER DALLAS, M.D., NEW YORK.

At the last meeting of this Society, I had the honor to present some new methods in the treatment of hernia (a full account of which will be found in the Society's Proceedings), and the interest then evinced has inducrd me to make a few additional remarks on this important subject. During the past year much has been written about it, but little real progress has been made. Quite recently, two special works on Hernia have been published in this country, but they contain nothing original, much that is harmful, and their only tendency will be to still further complicate a subject already sufficiently misunderstood.

Of the two divisions under which the treatment of hernia is generally spoken, viz.: the "palliative," or mechanical, and the "radical," or surgical, the "palliative" is, for many reasons, the more important; and yet, so far as the profession is concerned, it practically does not exist. To some of you, this statement may seem extreme, but a somewhat extensive experience in this special branch of practice compels me to re-iterate it. Few practitioners take any personal part in the mechanical treatment of hernia; fewer still take the trouble to master its principles, while surgeons affect to regard it as unworthy of their attention. Other branches of medicine have been advancing steadily, especially of late years, but the palliative treatment for hernia has remained virtually stationary for centuries. Celsus, who practised it in the first century, tells us that, in his time, a girdle of some firm material was used, with a pad to retain the rupture. In 1306, the girdle was first made of iron, and in 1628 steel commenced to be used, but, with the exception of a difference in the materials employed, the principle has remained the same.

Our teachers and text-books keep on repeating one another without change, recommending instruments which they have probably never tried and promising results which cannot be attained by the methods now in use. Disappointment inevitably follows, but no real effort has been made towards improvement, and the palliative treatment of hernia has expired from "dry rot."

In regard to the radical or surgical treatment of hernia, the tendency is all the other way. Here, as elsewhere, there is too great a readiness to appeal to the knife, and the multiplicity of so-called "radical cures" is absolutely confusing, while the results are not at all commensurate with the risks incurred. The craze for the so-called "open method" is at present so excessive that there is often little left of the original structures involved, and the permanent injury inflicted on the patient is entirely overlooked. The *fin de siècle* surgeon no longer "repairs," he "re-constructs"!

As the result of this attitude of the profession towards the ruptured, the treatment of hernia has always been a fruitful field for impostors; and charlantanry was never more rampant than now. The Heaton injection method has been resurrected, and, though its inefficiency was proven many years ago, it is now flaunted in almost every town throughout the country as an unfailing cure for every form and variety of hernia. The most humiliating feature in this revival of a dead issue is the fact that these quacks are aided and abetted in their nefarious methods by reputable members of the profession, who not only send them patients but certify as to the successful results of their treatment. These gentlemen fail to see the unenviable position in which they place themselves and the great injustice and injury they inflict upon their patients and their profession.

One valuable lesson we can all learn from these charlatans is the absolute necessity for constant personal supervision in the management of the palliative treatment of rupture cases. We must not only give them our personal attention but we must be persistent in our efforts if we wish to succeed. Just as soon as we begin to do so, we will realize the imperfections of the trusses now in use and appreciate the causes of our failing to obtain cures. Indeed, the unsatisfactory results obtainable by the present faulty instruments are largely responsible for the indifference and neglect bestowed upon these cases.

Notwithstanding this, the extraordinary claim was made here last year that good trusses were so plentiful that, in any small town, instruments could be found suitable for any case. Such a

* Read at the Annual Meeting of the New York State Medical Society.

statement is controverted by experience and is not borne out by the speaker's clinical results. Misleading statements of this kind only tend to paralyze all progress and check all efforts after improvement.

To command success, the first absolute requisite is to employ a truss that will *permanently close* the internal ring. With the ordinary circular spring or girdle truss, this is a physical impossibility. The history of the centuries proves it. You may adjust your instrument over the internal ring but, whether you employ the ordinary spring or the "crossbody" truss or the "frame" truss or the so-called "silver" truss, it soon sinks down until it rests upon the pubic bone, leaving the internal ring unprotected and exercising injurious pressure upon the spermatic cord. The pressure in all varieties of the "circular" truss is from below upwards, thus increasing the pouting of the internal ring and inviting to the presence of a bubonocele which prevents the possibility of a cure. Many practitioners recommend the use of the so-called "elastic" truss but, in doing so, they display ignorance of the first principles in the successful management of these cases. Not one of you would advise the employment, for months or years, of a tightly applied Esmark bandage over any other part of the body; but the statements of some of our authorities on Hernia would lead one to suppose that the tissues involved in a hernial protrusion are not subject to the same laws as govern other portions of the body. They do not believe in atrophy of the tissues from over pressure; they smile at the idea of possible injury to the delicate vessels comprising the spermatic cord from the constant application of from 3 to 4 lbs. of pressure directly over the pubic bone.

Nevertheless, gentlemen, the atrophy is *there* and the injury is *there*; and the difficulty in the management of these cases is, not so much from the rupture itself, as from the injurious effects of previous improper treatment. Some authorities seem to think that a truss, to effect a cure, must produce some vital change in the parts to which it is applied. Such an idea is erroneous. The action of a truss is *purely mechanical.* Its application is intended to keep the internal ring *permanently* closed and, by preventing the intrusion of any foreign body, the ring contracts in obedience to the natural law that "*a cavity always adapts itself to its contents.*" By doing so, all ruptures under puberty can be rapidly cured for, in these cases, there is a strong natural tendency to closure of the ring. So also, most recent cases in adults can be treated with like success but the treatment must begin early and be carefully persisted in. This statement will doubtless be questioned but clinical facts outweigh all theories and preconceived ideas based on the results of faulty instruments.

A frequent cause of failure in the management of these cases is the want of proper medical supervision, but no amount of effort will avail unless you emply a truss that thoroughly controls the internal ring. By careful and persistent attention on the part of the physician, aided by intelligent assistance on the part of the patient and the em ployment of a proper truss, results can be attained that will be both surprising and gratifying. At the same time, efforts should be made to develop the weakened tissues and care should be taken to remove all causes that would tend to prevent nature in her efforts to effect a cure.

My own early experience in the mechanical treatment of Hernia was, like that of all others, most unsatisfactory. One truss after another was tried and discarded until, in despair, I had one made to meet the indications as I understood them. After many years experimentation, I submitted the instrument to your inspection. I did not claim that it was perfect, as one speaker disin genuously stated, but I did claim that it gave better results than any other with which I was acquainted. Another year's experience has more than justified the claims then made; and its method of manufacture, as you see, has been greatly improved. It is the only truss which can be permanently retained over the internal ring, resting immovably, as it does, upon the crest of the ilium.

Its pressure, unlike all other trusses, is applied from above downwards. It interferes less than any other truss with the movements of the body and is less affected by them. On account of the groove in the face of the pad, it is the only truss which does not exercise injurious pressure upon the spermatic cord. By its use, more cases can be cured than by all other trusses combined. When from any cause, the cure is unnecessarily delayed, or reasons of expediency demand a speedy result, the freshening of the canal in the manner advocated by me will effect a safe, speedy and permanent cure.

Selected Articles.

THE TREATMENT OF ABORTION.

I am prompted to write upon a somewhat worn subject by the fact that during the past year I have met with an unusually large number of cases of incomplete abortion which have been allowed to run on until they have developed more or less grave septic conditions, or have become seriously anæmic from the continued bleeding.

These cases, which I might use as illustrative, were none of them from my clinic at the Polyclinic, where we see them only too frequently, and where poverty, ignorance, and often previous treatment by equally ignorant midwives, lead us to expect conditions otherwise inexcusable, but were all of them from the upper and middle classes, and were referred to me by intelligent physicians. So it seems, in spite of all that has been said and written in favor of active, efficient, and early interference, many practitioners prefer to take the chances of time and ergot in the hope, sometimes, it must be admitted, realized, that all will finally come right. Others, recognizing the necessity of action, but with an imperfect technique, partially succeed in clearing out the uterus by the aid of the finger or curette, and in the attempt carry infection into the uterine cavity.

It is true that cases of incomplete or neglected abortion do not usually die, either from the continued hæmorrhage or from sepsis; they struggle through a period of acute anæmia, or fever and prostration, and finally may recover perfectly, but more often are left with a chronic infection affecting the endometrium or extending also to the tubes and peri-uterine structures, a condition which, in the light of modern pathology, we cannot consider inconsequential, knowing that it so frequently leads to the most serious pelvic trouble. The truth of this statement may be easily proved by reference to one's private case-book, or by the records of any large gynæcological clinic. Thus, out of five thousand consecutive gynæcological cases which have come under my observation at the New York Polyclinic, fourteen hundred and ninety-two, nearly thirty per cent. (29.8), had aborted one or more times, and of these, five hundred and thirty-five, nearly thirty-six per cent. (35.8), suffered from disease of the uterus or appendages directly traceable to infection following abortion. It is safe to say that the immediate, thorough, and aseptic removal of the ovum, or its fragments, in these cases would have prevented the greater part of this disease and its attendant disability.

Before discussing our subject further it is necessary to understand what we mean by abortion, and to sketch briefly its causes, diagnosis, and course.

Abortion is defined by nearly all lexicographers as "expulsion of the fœtus before the seventh month, or before viability;" but to insure clearness it is advisable to limit the word to its stricter sense, of "expulsion of the ovum before the end of the third month," and to employ the term "miscarriage" for expulsion between that period and the time when the fœtus becomes viable.

Abortion or miscarriage may be from pathological causes affecting the fœtal or maternal organism, or may be induced.

Maternal causes may be systemic—from poisons circulating in or conditions impairing the mother's blood, or disturbing the circulation mechanically, as syphilis, malaria, the exanthemata or other fevers of severe type; cholera, poisoning by CO, CO_2, and other gases; salts of certain metals (lead, copper, etc.), and vegetable alkaloids; albuminuria, cholæmia, lithiasis, anæmia; and visceral (liver, lung, and heart) disease affecting vascular tension.

Maternal causes may be local—from retro-displacements of the uterus, pelvic adhesions, endometritis, pelvic or uterine tumors. They may be reflex—from gastric, rectal, or mammary irritation, mental shock, or excessive emotion, exhaustion of nerve-force, as in chorea or in epilepsy.

Fœtal causes may be primary or the result of maternal dyscrasia, and include disease of the fœtal envelopes, as fatty, hydatidiform, or fibrinous degeneration, or inflammation or hæmorrhage of the chorion or placenta, death of the embryo, or any malformation affecting the circulation of the fœtus and causing hydramnion or oligohydramnion.

Finally, abortion may result from combinations of any of these causes. Induced abortion may be accidental, legitimate, or criminal. Accidental causes may be uterine traumation from blows, falls, wounds, excessive or violent coitus, etc., and we might again include here excessive emotion and mental shock. Criminal abortion may be from general violence, mechanical injury to the uterus or ovum, or from the administration of certain drugs.

The symptoms vary with the time at which the abortion occurs. If within the first six weeks the woman may complain only of a moderate amount of lumbar pain, dull and heavy or cramp like, or there may be no pain and an amount of hæmorrhage, which she may consider as simply an excessive menstruation. Very often she does not recognize the passage of any shreds of tissue, or clots, and the abortion passes unnoticed. At other times portions of chorion remain behind, and she comes to the physician complaining of the prolonged spotting or flow. Later, and up to the time when the placenta is fully developed, the lumbar pains are more marked, the cramps more severe and rhythmical, and the hæmorrhage much greater in amount. If the abortion be the result

of natural causes and the death of the ovum has occurred several days before its expulsion, it usually comes away entire. If the ovum is alive, or if the abortion be induced by mechanical means, the fœtus usually escapes, leaving the whole or a part of the chorion behind.

Bimanual examination shows the uterus enlarged, soft, except during a contraction, the cervix softened and more or less dilated, and often with a portion of the ovum plugging the os. After the expulsion of the entire ovum the pains and bleeding cease and the uterus contracts. If a portion of chorion or placental tissue be retained, the bleeding, pain, and dilatation may continue until it is expelled, or the cervix may contract, the pains become slight or cease, the bleeding stop, and the mass be retained either to disintegrate and come away in the discharge, to become septic, or, exceptionally, to develop into a fleshy mole. Rarely there may be death and infection of the ovum without producing either pain, hæmorrhage, dilatation, or foul discharge, the only symptoms being cessation of uterine growth, followed by irregular slight chills and septic fever.

After the third month the symptoms approach more nearly to those of a premature labor. We have the rhythmic pains, the hæmorrhage, which is apt to be more profuse, the dilatation of the os, and, more often, the spontaneous evacuation of the entire contents of the uterus.

Abortion may be considered inevitable when the result of a cause that cannot be removed, when the pains are severe or rhythmical, the hæmorrhage profuse, the os widely dilated, or when any portion of the ovum has been expelled.

Threatened abortion may sometimes be averted when the cause is a remediable one, and the pains, bleeding, and dilatation are only moderate. When abortion becomes inevitable one of two things happens, either the uterus empties itself entirely, or a portion of the ovum is retained. In the first case the uterus contracts, the pain and hæmorrhage cease, there is a pinkish flow for a few days, involution proceeds normally, and the condition remains practically the same as before conception. If, however, portions of placenta or chorion remain in the uterus the clinical picture is changed. The symptoms noted diminish at first, but do not entirely disappear; the pain may cease for a time and then reappear, and the fragments be expelled, or the os may contract and the fragment be retained until it gradually breaks down and passes away with the discharges. In this latter case the bleeding continues, as a persistent leakage, often for from three to six weeks, and may reduce the patient to an extreme degree of anæmia, though it in itself rarely kills. Very often, and almost certainly, if this incomplete abortion be the result of criminal interference with the ovum, the retained tissues become infected and we have a septic process begun which may induce serious and persistent pelvic disease or directly destroy life. Sepsis is the condition most to be dreaded, the condition to be most carefully watched for, the condition to be most vigorously fought against. We must always be on the watch for its first symptom, and when we recognize it, whether it be as an elevation of temperature, a chill, or a fœtid discharge, we must remember its probable source and explore the cavity of the uterus. Septic material may be there even though the cervix be perfectly contracted and hard, though there be no hæmorrhage, no discharge, and possibly no other local symptom. I have seen several instances to which this description would apply, one of which ended in death. But the sepsis is not usually of a virulent type, the case runs on, the woman recovers from the immediate danger, but the fever, the hæmorrhage, the infection, have interfered with involution; the uterus remains large, heavy, and soft, and is apt to become retro-displaced; the infected mucosa, thickened, soft, and friable, becomes the seat of a chronic endometritis which may at any time lead to tubal and ovarian trouble, and the woman suffers indefinitely from the metrorrhagias, the pelvic pains, and the systemic depreciation which accompany these conditions.

Treatment.—A local examination is always imperatively necessary when any of the signs of impending abortion appear. Then, if the symptoms are not marked, if the pains are slight and irregular, the bleeding moderate, the os not much dilated, and the cause one that can be remedied, as, for instance, retroversion, we may hope by absolute rest in the recumbent position, by the administration of full doses of opium, and viburnum by suppository, or morphia hypodermically and by the re-position of the displaced uterus, to carry the patient through her period of danger and allow the gestation to continue. If the cramps are regular and well marked, the hæmorrhage considerable, and, particularly, if the os be dilated, these hopes will not be realized, the loss of the ovum becomes inevitable, and it is our duty to hasten its expulsion. As the method of procedure now varies according to the period of gestation, we may draw a line of division at the end of the third month, and consider the case as either "abortion" or "miscarriage."

Abortion.—As the uterus before the end of the third month is still comparatively small, and will not allow the accumulation of any considerable amount of blood in its cavity, the use of the tampon is sometimes permissible before the expulsion of the fœtus, not so much to check bleeding as to excite more vigorous expulsive contractions. When expelled, the patient is to be put in the dorsal position on a Kelly pad, the vagina and cervix

thoroughly cleansed by a douche of hot soap-suds rubbed into all folds and crevices by the fingers, and followed by irrigation with 1 to 4,000 warm bichloride solution. Then a strip of iodoform gauze is carefully packed into the cervix and the vagina tamponed. This packing is removed in from eight to twelve hours, and the ovum will be found loose in the vagina or in the dilated os. If at this time no portion of the ovum be expelled, that is, if its envelopes be still intact, the packing may be carefully repeated. If any portion of the ovum has been expelled, the remainder should be removed at once, either with the finger, which can seldom be used at this early period, with the ovum forceps, or with the dull curette.

If there be reason to believe that the abortion has resulted from criminal interference, if the case has been allowed to run on for many days, if there be endometritis or any form of sepsis, the os should be dilated, preferably after the administration of an anæsthetic, the fragments of the ovum removed, and the whole interior of the uterus scraped carefully and thoroughly with the sharp curette, washed clean with a strong watery solution of iodine and packed with a strip of sterile iodoform gauze. This gauze should be removed in twenty-four hours and the vagina irrigated. If septic symptoms continue, the uterine cavity may be again irrigated with the iodine solution, and a fresh strip of gauze carried to the fundus.

The effective and safe manipulation of the curette and gauze in this manner pre-supposes on the part of the operator a certain amount of skill and familiarity with its use.

Miscarriage.—After the third month the use of the tampon for hæmostatic or other purposes is reprehensible, as the uterus is then larger and dilatable, so that a dangerously large amount of blood may accumulate in the cavity. If the hæmorrhage from miscarriage is moderate, the treatment may be expectant for a limited time until the entire ovum or the fœtus be expelled. If the fœtus alone be discharged, the remaining portions of the ovum should be immediately removed with the finger, aided, if necessary, by the ovum forceps or large curette. If the hæmorrhage be profuse there should be no delay, the os should be dilated and the uterus cleared out at once. Where there is sepsis the indication is for the use of the sharp curette, irrigation, and packing, as already described.

When we have legitimate reason for inducing abortion it is best done by immediate clearing out of the uterus after anæsthesia and rapid dilatation, the uterus being washed clean and a strip of gauze introduced for drainage. When miscarriage becomes necessary the preliminary dilatation is usually best secured by the employment of an aseptic tupelo tent of the largest size that can be inserted into the os, then, if the ovum be not spontaneously and completely expelled it is removed digitally or with instrumental aid.

To avoid danger and secure success in these manœuvres it is necessary that they be done aseptically and by one accustomed to surgical cleanliness. The hands and arms of the operator should be scrubbed for five minutes with a stiff brush with soap and hot water, and then soaked for the same time in a 1 to 1,000 bichloride solution. The instruments can either be wrapped in a towel and boiled at the time in a weak solution of soda for fifteen minutes, or may be carried already sterilized, and laid on a sterilized towel ready for use. A strip or strips of sterile iodoform gauze should also be prepared and wrapped in a sterile cloth.

Tupelo tents may be sealed separately in small envelopes and baked for half an hour, and are then ready for use when wanted. The Kelly-pad requires most careful attention, and must be thoroughly washed in running water, rinsed in the bichloride solution, and carefully wiped dry each time after use. The fountain syringe used for irrigation may be scrubbed in hot water and soaked in bichloride, or boiled if used where there is a suspicion of sepsis. The patient, after having had her bladder and bowels emptied, is to be placed in the dorsal position on a table; or the hips may be brought to the edge of the bed, a firm bearing surface for the Kelly-pad being secured by a table-leaf, ironing, or lap-board; and the external genitals and vagina thoroughly cleansed with hot soap-suds, two fingers being used to rub over the mucosa of vagina and cervix. This should be followed by irrigation and rubbing with a 1 to 4,000 bichloride solution. The parts adjacent to the vulva and the exposed portion of the pad are then covered with wet sterilized towels and the operation performed.

In conclusion I may state my position briefly as follows:—Recognizing that any interference with the uterine cavity must be looked upon as a possible source of infection, and must be made aseptically and with antiseptic precaution to be free from danger, I strongly urge that in every case where abortion or miscarriage begins acutely and from natural causes, the ovum be removed by the finger, ovum forceps, or curette, within twenty-four hours after the abortion be considered inevitable, if the entire ovum be not then already expelled, complete expulsion being indicated usually by cessation of pain and hæmorrhage. In cases where a portion has been expelled, where we find serious hæmorrhage, where the ovum is dead, where we have reason to suspect criminal interference, where there has been continual spotting, foul discharge, or fever, the uterus should be explored and emptied at once, as any delay greatly increases the risk of sepsis. The sharp irrigating curette, followed by gauze drainage, should always

be used where there is septic material present, or where the endometrium is diseased, in other conditions the finger or a dull instrument is sufficient.—Brooks H. Wells, M.D., in *Med. Record.*

ELECTRICITY IN THE REMOVAL OF FACIAL AND OTHER BLEMISHES.

In considering the process of electrolysis it should be stated at the outset that electricity does not by its inherent magnetic power cause destruction of tissue. The constant galvanic current alone may be caused to produce destruction by the chemical action within the tissues of the caustic alkalies, which are freed at its negative pole, and the acids, etc., which are set free at its positive pole. The extent of this action is entirely controllable by the skill of the operator.

A popular but mistaken idea exists on this point, which is well illustrated by the following story:

A telegraph operator applied to the writer for treatment of a nervous affection. Telegraph operators are inclined to feel very thoroughly versed in the mysteries of electricity, and could usually "treat themselves as well as any physician," but for some trifling obstacle which they incidentally encounter. A recognition of this fact will give point to my story.

The patient's mother was also an old experienced telegrapher, in active service, and had herself trained her boy to send and receive with unusual skill.

Upon receiving a letter from him (she lived in the West) that he was being treated by an "electrical specialist in New York," she quickly wrote back, with fond maternal solicitude, to be "very careful and not get electrolysis and injure himself with it."

The apparatus required for the kind of work to be described consists of a galvanic battery of low tension and a voltage that need not exceed fifteen or twenty. An ordinary hand electrode, a pair of epilation forceps, a solid needle holder and a set of needles completes the outfit. The needle holder should not contain an interrupter. Dealers make and sell handles with a device for interrupting the circuit flow, but such a procedure causes a needless aggravation to the patient and is to be sedulously avoided in general practice.

As to proper needles, gold and platinum ones are most frequently recommended for the positive, but for negative use none are superior to fine assorted brooches, bought at a jewelers' material store, and rounded down to a blunt point on a smooth oilstone. The necessity for this will be seen from the fact that a sharp-pointed instrument would pierce through the side of a hair-follicle sac so easily that the operator would not detect it; while a blunt pointed needle would follow the hair down to the root, and stop when it has reached the bottom. This is important in the removal of superfluous hairs. For other purposes sharp-pointed needles are required.

Warts, moles, birthmarks, etc., are of various forms, but we may consider them all in two classes—the elevated and non-elevated. In treating these properly the physiological action of the opposite poles must be taken into account.

If we, for experiment, insert two needles connected with the positive and negative poles of a galvanic battery and pass a constant current strong enough and long enough to produce destruction and then allow the wounds to heal, we will find that two scars remain, and if we watch these scars for some months it will be observed that one very soon turns white, sinks slightly below the surface and contracts, until it is a hard cicatrix.

This results from the caustic acids, chlorine, etc., set free at the positive pole. The negative scar produced by the softening, relaxing caustic alkalies presents nearly an opposite appearance. It is quite liable to be raised above the surface of the skin and to remain red and irritable. By a combination of the action of the two poles with proper skill we hope to obtain a modified scar which will not be depressed, contracted and unduly white, or elevated, red and irritable. The action of the opposing poles must be skillfully balanced against each other, so that the nævus may be removed permanently with as little disfigurement as possible.

This is always a matter of judgment in which experience alone furnishes the guide, taking into account that the negative scar is irritated if exposed to cold blasts of air or subjected to irritation, that the nævus, full of bright, red arterial blood, requires the predominance of the positive pole, and dark venous ones the negative; that in a plethoric or young vigorous person the positive should predominate, while in the thin, the anemic and the aged the negative should predominate.

In removing a facial tumor both needles are to be introduced, unless in some special cases it is desired to secure the action of one pole exclusively. They should be introduced with great care at the base of the nevus, parallel to the surface, and not under the tumor, but so near the bottom that the electrolytic action will destroy it thoroughly.

Inasmuch as the destructive action of the current is the same in all directions around the needle, beneath as well as above, it is very necessary to diagnose the depth of the tumor before introducing the needles in order to avoid destroying more tissue than is absolutely necessary and leaving a scar unduly large. But it is equally important to destroy all the diseased tissue around the edge of the nævus, and leave nothing but healthy tissue, or nuclei may be left for the repro-

duction of the tumor, or the cicatrix may be left imperfectly healed.

In a vascular nævus the positive platinum needle should be introduced over the site of the principle vessels to secure its drying, coagulating effect and firm eschar where it is most needed. The after-treatment of the sore, which is really a burn, conforms to simple surgical rules, but healing may take place slowly.

In cases where there is a smooth growth of skin over the plexus of vessels, we seek to destroy the vessels but not the skin. For this purpose the needles must be insulated near the point so that no electrolytic action takes place at the seat of puncture.

It is a rather difficult thing to do. The positive needle should pierce through the centre of the tumor and be held stationary, while the negative may be inserted first on one side and then on the other till the tumor has a hard, elastic feeling, but no surface discoloration should take place. If there are no signs of softening in a week or so, repeat the process. Some cases have a tendency to return and treatment is not always satisfactory. Occasionally a slough is produced before eradication is complete.

Moth patches, port wine birthmarks and all pigmentary moles, etc., are removed in a somewhat different manner, although the same principle of polar action still applies.

Instead of working through the base we here simply puncture into the nævus, at intervals of say one-sixteenth of an inch, and continue over the surface until the action around each of the needles merges and forms a continuous patch.

Very slight punctures and a small amperage only are required, and it is important that the new integument which is to cover the area should start from healthy borders. While not distressingly painful or requiring an anesthetic, yet if the mark is large the removal may be tedious, as several operations will be necessary and each allowed to heal before another is begun.

If a mole has a hair growing in it remove the hair first and wait for it to heal before attempting further. The steps for the removal of superfluous hair are as follows:

The all important point is the introduction of the needle, and the experienced operator will depend more upon his sense of feeling than on his sight. The needle should be inserted down alongside the hair to the bottom of the sack, but no further. If it is in the follicle it glides smoothly along with but very little pressure until it reaches the bottom. If it does not properly enter the follicle it will require considerable pressure to get it through the epidermis. The needle is attached to the negative pole and should be inserted while the circuit is broken, closing the circuit by having the patient bring his or her hand in gradual contact with an ordinary electrode placed conveniently near.

As to the current strength, less than 4 M. A. will be all that is required, but the intensity should not be intolerable to the patient. Usually in less than a minute of time a little frothy substance will be detected around the needle, and it indicates that electrolytic action has taken place. No destruction of tissue should be caused by using stronger currents for longer periods, but the needle should be removed and the hair withdrawn by the epilation forceps. If it comes out easily the follicle is destroyed, and the hair will not return. If force is required the hair is not destroyed, and the needle should be re-inserted and the current applied again.

Avoid too frequent operations. Sittings that repeat treatment of the same site should first permit the part to fully heal. With the best operators probably 5 to 10 per cent. of the removed hairs will return. In removing one blemish avoid making another that is worse.

All this treatment takes time, and unless patients are informed of the necessity for patience they will not be prepared for the apparent delay in achieving results. Haste is often made very slowly in this branch of electrical work.--*Times and Reg.*

FORCIBLE APEX EXPANSION IN INCIPIENT PHTHISIS.

It is generally conceded that a suitable soil is absolutely necessary for the life and development of the tubercle bacillus. It may be asserted also that this suitable soil is usually found in the apical alveoli, and exists there as the result of a sluggish circulation of air in the air cells and of blood in the blood-vessels. Statistics of the mortality of tuberculosis show that the disease is most active and frequent among those who occupy a stooping position, which drags down the upper chest by the weight of the arms and diminishes the capacity of the apices. This is a sufficient explanation for the location of the disease in the apical tissue.

Hyperæmia of the parenchyma, together with the exudation of a thick gelatinous and albuminous fluid into the alveoli with large and small cells and some red blood-corpuscles, go to make up the suitable soil or consolidated area. Some time during the existence of this consolidated area the tubercle bacillus gains access and begins its destructive work. The miliary tubercular deposit probably comes later in the progress of the disease.

Dr. Prudden has shown in a recent article that when other pyogenic germs infect the tubercular lung the process of destruction is greatly accelerated, and cavities form rapidly. Before the destruction of tissue begins the consolidated area is

composed mostly of alveoli plugged with inflammatory or catarrhal products, which may or may not be infected with tuberculosis; and the great danger to the patient is that they may become tubercular. Now, if these plugs can be blown out of the alveoli and a forced use of the alveoli made, they will soon resume their normal condition. Every cure of phthisis is the result of an increased respiratory activity and capacity, which is directly antagonistic to the development and extension of the disease.

Dr. T. J. Mays, in an excellent article in the *New York Medical Journal* for March 10, 1888, has shown that apex expansion or ventilation is the most important factor in the cure of incipient phthisis. This condition is promoted in the highly attenuated atmosphere of high altitudes. The whole lung capacity, including the apices, must be used in order to supply the required oxygen. This increased use of the air cells fills them with air and gradually expels the plugs of *débris*, thus limiting the destruction and restoring healthy conditions.

Now, as the disease is confined to the apex from the start, can not this great end be accomplished by artificial means, or rather voluntary effort? Exercises in pulmonary gymnastics intelligently directed toward greater apical expansion and increased chest capacity will give the very best results. This line of treatment may be supplemented by the use of the pneumatic cabinet at the office.

A cure after this manner is radical and permanent, as there is no *débris* left in the alveoli to favor the return of the trouble.

A careful diagnosis should be made in the beginning. In too many cases the patient is told that he has a little bronchitis; valuable time is wasted and the golden opportunity lost. When the destructive processes once begin, the chances are greatly against recovery. Treatment should be instituted as soon as the symptoms first show themselves whether a distinct area of consolidation can be discovered or not; for often it is discoverable only after a considerable area of tissue has become infiltrated.

The method I have found most useful is not only full breathing, which has been recommended in various ways, but after a full inspiration the breath is held for a moment by closing the glottis. The effect is increased if, during the holding of the breath, the lower chest is compressed with the hands. After a few weeks the inspirations become fuller and the tension developed greatly increased. The arms should be raised in order to get the fullest inspirations. These efforts at forced expiration should be continued for ten to fifteen minutes every two hours during the day—before arising in the morning and after retiring at night. The holding of the breath I consider a very important point in the treatment. It will require some practice to be done properly so as to give the best results. It should produce a ballooning of the chest and consequently of the air cells themselves. The immediate result will be an increased amount of oxygen in the blood—a strengthened heart's action, and a facilitated expectoration, which alone gives great relief. The air cells will be kept almost constantly open and ventilated, and their plugs of *débris* expelled, old pleuritic adhesions stretched, and the chest visibly enlarged. The chest expansion will be increased in a short time, and the progress of the disease inhibited. This treatment is, of course, applicable to the quiescent periods of the disease. The patient should be under the constant observation of the physician. In the beginning, and for the first week, the efforts should not be too violent or some pleuritic pain may be produced. During, and for a week after hæmorrhage has completely stopped, pulmonary gymnastics should be suspended.

It will be observed that the means for removing the local lesion of consumption are purely mechanical and consequently certain of results. Removal of a nasal obstruction is mechanical, and is very often necessary in order to facilitate the entrance of air into the lungs and check the catarrhal tendency. Increased vital capacity is the great desideratum, without which there can be no cure of phthisis.

The treatment by differentiation of air has about the same effect on the lungs, but one or two treatments a day will not be sufficient to keep the collapsed or plugged alveoli ventilated.

Noble Smith (*British Medical Journal*,) has employed a brace by which the shoulders are drawn back, arms supported, and the stoop prevented with good results in cases seen early enough.

A corset which prevents abdominal breathing would compel a greater use of the upper chest cavity. The spirometer may be used to measure the capacity of the chest, and the manometer the tension developed or expiratory power.

To overcome the muscular atrophy about the chest, and to increase its expansion, I have my patients learn the use of Indian clubs and dumbbells, and use them regularly. To protect the patient against sudden changes of atmosphere in our rather variable and harsh climate, he should wear a chamois-skin jacket over a medium weight flannel. Catarrhal conditions of the nose and throat should be corrected so that every oft-repeated cold does not aggravate the pulmonary congestion. At the same time proper medication should be employed in order to increase the chances and rapidity of recovery.

All this requires more work and persistence than simply taking medicine, and patients need to be constantly encouraged by the positive assertion that they will recover their health if they use the means.—H Weaver, M.D., in *N. Y. Med. Jour.*

NOTES ON THE PAST AND FUTURE OF VENESECTION.

When to let blood has, from the earliest days of medicine, been a burning question. The Saxon Leeches were divided on it, their difficulty being the phase of the moon most suitable for the operation. Two or more centuries later, rival schools of medicine held different views as to which side the patient should be bled; some contending that the side on which the inflammation existed was the proper one for venesection; the opponents of this view of the site for bleeding adduced many and learned arguments to prove that venesection was not efficacious unless performed on the side opposite to the inflammation. All this time, however, no physician questioned the value of venesection. The first shock to the medical profession practising this time-honored custom came from a layman, Alaric Réné le Sage, who caricatured the Sagredo of Espinal, the great doctor of Valladolid, Sangrado, who informed his pupil, Gil Blas, that "other physicians made the healing art consist in the knowledge of a thousand different sciences, but I go a shorter way to work, and spare the trouble of studying pharmacy, anatomy, botany and physic. Know, then, that all which is required is to bleed the patient copiously."

Patients appear to have enjoyed the operation. We read that Mary Anne, daughter of Don Jerome, of Quito, was bled, according to M. Guérin, five hundred times in the space of two years.

In the British Islands phlebotomists travelled the country, thatching houses, spaying sows, and bleeding. A spring and autumn venesection was considered a necessity. Young and old underwent the operation. Nor was the custom confined to this country: Italian families kept their bleeding vessels, and it was an accident of plebotomy that gave Anel the oportunity for testing his operation for aneurism.

The operation was grossly abused for ages, and, as a consequence, the medical profession and the public became prejudiced against the lancet; it fell into disuse, and thus a useful and efficient therapeutic agent was disregarded.

We are now, however, coming to recognize that venesection has a place in practical medicine, and that the abstraction of a few ounces of blood is sometimes one of the most efficient measures we can adopt. There is a general concensus of opinion in favor of a careful clinical study of the value of venesection.

The paper on venesection read by Dr. Pye-Smith before the Royal Medical and Surgical Society in January, 1891, attracted much attention, and in the discussion that followed, it was felt that Sir George Humphry voiced the opinion of every thoughtful member of the profession: "that bleeding was one of the most important agents in the treatment of disease." That, as stated by Dr. Pye-Smith, "the accumulation of experience would soon lead to the formation of an opinion as to the cases in which this measure was desirable," will meet with approval of the great majority of the profession at home and abroad, is noticeable from the discussions and papers on the subject appearing in foreign journals.

In the Royal Academy of Medicine in Madrid, Senor Iglesias recently made venesection the subject of a paper which produced an animated discussion, in which Senor Palido fairly stated that not from any bad results of the operation, but from its abuse it became discredited, an opinion which re-echoes the view of the French Academy.

The operation also forms the subject of a valuable paper by Dr. Stone in a late number of the *Therapeutic Gazette* in which, after reviewing at length the conditions which call for venesection, he concludes that he "sincerely hopes that he has convinced some of his audience of the great therapeutic value of the remedy."

Sooner or later the lancet will again come to be a valued weapon in contending with inflammatory diseases.—George Foy, F.R.C.S., in *Medical Press and Circular*.

TREATMENT OF INOPERABLE MALIGNANT TUMORS WITH THE TOXINS OF ERYSIPELAS AND THE BACILLUS PRODIGIOSUS.

The histories of ten cases of inoperable malignant tumors and a tabulation of forty-four cases of the same are given, showing the results of treatment with injections into the tumor of the products of the streptococcus erysipelatosus and bacillus prodigiosus. In the course of his experiments the author at first used living fluid cultures of the streptococcus erysipelatosus in ten cases. The difficulty in producing erysipelas and the danger attending an attack induced the author to use the toxic products of the growth of this microorganism. The cultures were obtained from fatal cases of erysipelas, and were grown for three weeks at a temperature of 37° C., and then passed through a Kitasato filter. The filtrate was put in glass-stoppered bottles, a small quantity of thymol crystals added, and kept in a dark place. Later the toxins of the bacillus prodigiosus, prepared in the same way, were used in combination with those of the streptococcus erysipelatosus. Again the streptococci were grown ten days in bouillon, the bacillus prodigiosus then being added, they were allowed to remain two weeks longer. The bouillon was then filtered and the filtrate was

found to be exceedingly active, ten to fifteen minims being sufficient to produce a temperature of 103° F. to 104° F. Other cultures have recently been used. They are prepared by growing the bacillus prodigiosus four weeks or more in the streptococcus broth, to which a little cacao has been added, and which is then heated one hour to 58° C. The fluid is used without filtration, and the injection of five minims has produced a temperature of 105° F.

Of twenty-four cases of inoperable sarcoma recorded, fourteen showed a cure or marked improvement, eight slight temporary improvement, and two no apparent effect. In a sarcoma of the neck and tonsil, the neck tumor was entirely removed, partly by breaking down and partly by absorption, and the tonsillar tumor was much reduced in size. The patient is alive and well more than three years since the beginning of the treatment.

Of the two tumors not affected one was a recurrent osteo-sarcoma of the testis.

Nine cases of carcinoma are reported, but are too recent to note more than marked improvement in several of the cases.

Of three cases, either sarcoma or carcinoma, one showed decrease in the size of the tumor, and is still under treatment, one no apparent effect and the treatment was stopped, and one remained stationary and is still under observation. Eight cases are reported, treated with true erysipelas. Of these three died, two showed no check to the growth, two rapid growth after temporary improvement, and one showed disappearance of the tumor, sarcoma of abdominal wall, and no return seven years later. Two cases following inoculation with live cultures resulted fatally from the erysipelas produced.

Conclusions: 1. The curative action of erysipelas upon malignant tumors is an established fact.

2. This action is more powerful in sarcoma than in carcinoma.

3. This action is chiefly due to the toxins of the erysipelas streptococcus, which may be isolated and used with safety.

4 This action is greatly increased by the addition of the toxins of the bacillus prodigiosus.

5. The toxins to be of value should come from virulent cultures, and should be freshly prepared.

6. The results obtained from the use of toxins without danger are so nearly equal to those obtained from an attack of erysipelas that inoculation should rarely be resorted to.—*Am. Jour. Med. Sci.*

CIRCUMSCRIBED ATROPHY OF THE HAIR AND SKIN OF THE SCALP.

It is not within the range of these few remarks to allude to the common form of bald patches which are met with in the hairy parts of the body. These are undoubtedly due to the invasion of the skin by a micro-organism, and they are known by the generic name of alopecia areata. But I am desirous to call attention to a group of cases which, so far as I know, have not hitherto been described, and which are distinguished by the following attributes:—1. The atrophic areæ are confined to the scalp. 2. The areæ are absolutely bald. 3. The areæ are depressed like ordinary scars. 4. The hair never returns. The following case is an example of the condition:—

A woman thirty-nine years of age, who has always had a fair share of health, and who is the mother of six children, came to me in 1893, because "her hair was coming out." There was nothing unusual in her skin or epidermic structures, but on examination she had a cluster of bald patches on her scalp, which were practically confined to the parietal regions. They varied in size from a split pea to a shilling; some had joined at their circumference. I could not obtain a history of any inherited tendency towards the condition, and it may be taken as a fact that she had not been syphilised. Neither had she at any time been the subject of severe headaches or had any injury. The scars (for such they literally were) resembled those one sees when lupus erythematosus attacks the scalp, or when a scald or a burn has been inflicted. I have looked carefully through my notes taken during the last ten years, and, although I find that thirteen such cases have consulted me, in every instance the patient has been a woman. I have naturally asked myself the question, "Why do these patches occur?" and I confess to an inability to find a satisfactory reply. The medical man might shelter himself behind a theory of local anæmia, which in the first degree would produce a diminished growth of hair, and if continued would lead to atrophy or even to local death, but no one would accept such an hypothesis. Cases of loss of hair, which have been either a sequel or a symptom connected with profound disturbance of the nervous system, are on record. Cooper Todd described the case of a man who fell from a wagon and sustained injuries which caused hemiplegia and loss of consciousness, and who one day on going to shave himself could not find any beard. Fischer, who had great experience in military surgery, noticed after gunshot wounds that the limb corresponding to the wound received (if that wound had interfered with the nervous integrity of the part) became bald. Virchow describes a circumscribed atrophy which has been

observed in one-half of the face, but at times in other parts of the body. On careful examination of the whole cutaneous area of an old man, evidence of cutaneous wasting will usually be found occurring locally and generally, the skin being wanting in lustre, and in some old and thin men I have seen the epidermis of the face and shins stretched over the bones like a piece of hog's bladder. Wilson called the condition *dermatoxerasia*. Celsus, in his chapter *de areis*, describes a form of baldness which probably refers to the case now under discussion. It is what he calls the worst form—namely, that which destroys the fat and renders the surface totally smooth—but he confuses it obviously with alopecia areata. One may, without any unfair straining of theory, easily understand that the injurious and positively cruel way in which women produce the curling of the hair will account for an injury to the scalp. Curling pins, curling irons, and curling papers form an essential part of the toilet armoury of almost every woman, and this torturing of the hair drags on the roots, and by so doing starts the inflammation which may be the forerunner of this atrophy. The scalp being so dull of sensation will enable the victim to bear a good deal of tension without much suffering. Again, the number of hairpins used in dressing the head may damage the scalp.—Tom Robinson, M.D., in *Lancet*.

THE SEQUEL OF A SPURIOUS PREGNANCY.

Young unmarried women of a hysterical temperament, after illicit intercourse, not infrequently closely simulate the symptoms of pregnancy, and no harm results; but an outbreak of religious excitement in eleven persons, terminating in acute mania, which followed on such a case, is, perhaps, worthy of record.

In a small country town there resides a family of well-to-do artisans, with a history free from any trace of insanity. The parents are in the prime of life, while their four sons and five daughters are adolescents. The favorite daughter, a shop assistant in a neighboring city, at the beginning of this year falling into bad company, was seduced, and soon afterwards, alarmed at the suppression of her menstruation, consulted a medical man, who suggested the possibility of pregnancy.

Returning to her home in a state of great mental perturbation, she locked herself into her room for several hours. When interrupted by her friends, she was found to be in a state of religious ecstacy, declaring that she had communed with God, who had revealed to her that she was about to die, and that Christ would appear to receive her into His arms.

Moved by her earnest protestations, the family gathered round the bedside, and sent off for her father and brothers, who were working in neighboring towns; and, influenced by the contagion of her example, began also to engage in prayer and anticipate the immediate coming of Christ.

When the father arrived on the scene, he found the whole family in a state of great religious excitement; his house had been divided by them into a part they called "heaven" and a part called "hell," the mother, who did not completely fall in with their views, having, of course, been consigned to the latter division.

Attempts by the parents to reason with and control their children were unavailing; unable to stem the torrent, the father and mother were soon as excited as the rest. For several days matters went on in this way; little food was taken, there was no sound sleep, day and night were spent in religious exercises in preparation for the immediate coming of Christ. The mental symptoms in all consisted in a state of ecstacy, with hallucinations of sight and hearing, and an overpowering desire to pray and preach.

At the end of a week the father came to his senses, and made strong efforts to induce his family to resume their ordinary mode of life. During an altercation which ensued, the eldest son jumped through the window in a semi-nude state, followed closely by the daughter who had been the originator of the mischief. Both were at once arrested by the police, and, having been certified to be insane, were consigned to the nearest asylum.

On admission, the male patient was found to be a well-developed, muscular man, with no evidence of bodily disorder. He was wildly excited, gesticulating, and shouting in an incoherent way, with hallucinations of sight and hearing. During the first week he did not converse rationally, had well-marked hallucinations, and was very restless and noisy at night. Improvement then rapidly set in, and at the end of a fortnight he was discharged recovered.

The female patient showed very similar symptoms. She, however, was more coherent, and gave a rambling account of her seduction, always winding up with, "But my sin is forgiven me; what man put into me God has taken out of me." She had many of the signs of pregnancy—*e.g.*, amenorrhœa of some months' duration, a milky fluid could be expressed from the enlarged breasts, and the areolæ were altered. In the course of a few months, coincident with an improvement in the mental condition, these spurious signs of pregnancy disappeared, and the patient ultimately completely recovered.

The remaining members of the family, sobered by the removal of the ringleaders, soon resumed their ordinary way of life, and have remained well since.

Remarks.—The history of this case is of con-

siderable interest when we compare it with the origin of the outbreaks of epidemic insanity occurring on the continent of Europe during the Middle Ages. For instance, we read that in 1260 a boy in Perugia prophesied a great calamity, and thence arose the famous epidemics *Flagellants* and *Scourgers* which spread throughout Europe. More recently in Sweden (1841-42), there was a well-marked epidemic of *religious ecstacy*, which affected a large number of the country people in the recesses of the kingdom, and was attributed to poverty and the action of fanatical excitement. Modern civilization has rendered widespread epidemics of insanity almost impossible; the fanatic of to-day, who in remote ages might have swayed thousands, finds himself after a short career within the walls of a lunatic asylum.—*Glasgow Med. Jour.*

CARDIAC LIVER.

"There is no disease," said Corvisart, "in which the liver is more subject to variations in volume than in disease of the heart when arrived at an advanced stage." It was by this citation that Prof. Hanot commenced a clinical lecture on the above important subject, and of which I give a brief *résumé:* The importance of heart disease in the pathology of the liver is easy to comprehend; the liver sends all the blood it receives both from the portal vein and the hepatic artery almost immediately to the right heart by the vena cava, and consequently the trouble in the circulation of the heart must have a considerable influence on that of the liver. Congestion of the cardiac organ must be followed by congestion in the hepatic veins, producing more or less compression of the cellular elements of the liver. But this congestion is not confined to the veins, it is propagated to the capillaries, and then to the ultimate branches of the portal vein, and finally to the vessels of the spleen, pancreas, and to the gastro-intestinal mucous membrane. It is consequently easy to understand that in heart disease the liver is not only increased in volume, but is seriously affected in the *ensemble* of its important functions. Mr. Hanot, in order to render his lecture more intelligible, traced the history of two cases under treatment in the wards. The first was that of a woman affected with mitral stenosis of rheumatic origin. She entered the hospital complaining of progressive weakness and constant oppression. Beside a souffle of the heart, the patient presented evident signs of œdematous congestion at the base of both lungs and a slight œdema of the ankles. The liver was not increased in volume, but a little painful to the touch; no albumen was found in the urine, but on the other hand distinct traces of urobiline were discovered, showing that the liver was already disturbed in its functions. Rest, milk diet and a little digitalis cleared away all the bad symptoms, and the woman left the hospital. This was a case of simple congestion.

The second case was of an extreme type. A young woman, after two pregnancies, remarked that her abdomen increased rapidly in volume, and when examined, ascites was diagnosed, and the large amount of liquid was accompanied by œdema of the lower limbs. The abdomen was covered with tortuous veins, and very distended. The patient was tapped several times, but finally succumbed from marasmus. At the autopsy the heart was found diseased, while the liver was greatly diminished in volume. The origin of the cirrhosis was evidently cardiac, as the woman never took alcohol.

Between these two extremes just cited there exist numerous intermediate morbid conditions in which the difference does not consist only in the degree of hepatic congestion, but in the previous state of the organ. Frequently the liver is the seat of disease, derived from alcoholism, successive pregnancies, infectious maladies, etc., simultaneously with an affection of the heart. All cardiac diseases do not, however, affect in the same manner the liver. Mitral stenosis produces the true cardiac liver, while affections of the aortic and tricuspid orifices produce but little alteration in the hepatic organ. The congestion varies in degree; sometimes it is but little marked; the complaints of tension and a sense of weight in the right hypochondrium; the liver is painful to pressure. In more advanced cases the organ is considerably increased in size, and the patients suffer from nausea, vomiting, constipation or diarrhœa; the urine is diminished in quantity and its density increased; jaundice is frequently observed, but rarely ascites. The treatment is frequently subordinate to the primary cause (the heart), but where the hepatic symptoms predominate, milk diet, purgatives, and dry or wet cupping will generally diminish the congestion of the liver and bring it back to its normal volume, causing to cease at the same time the tenderness and the dyspnœa. — *Med. Press and Circular.*

PROFESSIONAL COURTESY.

In these latter days when the stern requirements of the grand old "Code of Ethics" seem to pinch the professional aspirant for popular favor it is not surprising to meet with violations of its plainest edicts every day in professional life. But so alarmingly flagrant are these violations it is high time to call a halt, and either throw over-

board the "unmitigated nuisance" as it has been called in one of our late journals, or else compel professional men to observe its teachings. It has been well said that the Code of Ethics of the American Medical Association, the English Prayer Book, and the Declaration of Independence, present the finest examples of correct and polished diction that can be found in English literature. No one who can read the Code with an unprejudiced mind can deny that it embodies just what the instincts of every professional gentleman would suggest. It has become fashionable to speak slightingly of "the Code," classing it with the Code duello, and other obsolete things that belong to a past age, having no place in modern medical civilization. So far as exercising any salutary influence upon those whose interests it seems it is to violate it, it might as well have never been written. I doubt if one-half of the younger members of the profession have ever read it. Every day I come in contact with men claiming membership in the State and National Associations, who think nothing of consulting with homœopathists and irregulars of every stripe, so long as they can gain a fee thereby; who never stop to consider whether it is wrong to prescribe for the patient of another doctor without his knowledge, or even to make visits to patients under another's charge; to call in a surgeon to operate and then never ask him to visit the patient again; to violate the confidence of the consultation room by revealing its secrets to the friends of the patient, or even to criticize the treatment of the attending physician in his absence; in short to violate in every conceivable way the principles of the Ethical Code, and that other higher code of gentlemanly honor which should be innate in anyone assuming the high responsibilities of a noble profession. Where is the remedy for this? If these things prevail it will not be long before the medical profession will be reduced to the level of a trade. Already we look in vain for that delightful relationship to the family that was once the glory and beauty of professional life. Specialism has destroyed all this. Now, at any palatial mansion in our large cities you may see several professional carriages before the door. The eye doctor, the womb doctor, the skin doctor pass and repass each other in the hallway with a grimace or a growl, and the dignity and honor and glory of the physician is a thing of the past. No wonder this ghost of the Ethical Code frightens the professional time-server of the day. Our great men are fast dying off, and the new code advocates are swarming over the places which they once graced, dignified and honored.

Ridiculed, violated and contemned as it is, it will be a sad day for American medicine when the Code of Ethics shall have passed into "innocuous desuetude."—T. O. Summers, M.D., in *Southern Practitioner.*

MEDICAL NOTES.

Prof. Keen says persons suffering from *Chordee* should empty the bowels before retiring.

Prof. Keen says the irritation of *Inflamed Intestinal Piles* very often produces urinary disturbances, and in some few cases even retention.

Prof. Hare says in cases of *Diabetes* in which there is reason to suppose that the kidneys are in an acne condition, alum will sometimes be found an active drug.

Prof. Parvin says that some women abort repeatedly; this is not due to an acquired habit, but to the cause that brought on the first abortion still being present and acting.

Prof. Parvin says, in an *Abortion* occurring before the placenta is formed, the hæmorrhage is from the entire surface of the uterus; but after the placenta is formed, it is only from the placental site of attachment.

Prof. Hare says inunctions of a very small amount of mercurial ointment, rubbed in once a day in a case of *Anæmia*, will increase the fulness and redness of the cheeks and lips and the number of the corpuscles.

Prof. Hare is of the opinion that anything which acts either chemically or mechanically and maintains a constant but slight degree of unusual vascularity of a part, may lead possibly to development of a *Malignant Growth.*

In *Abortive Cases of Typhus*, Prof. Wilson says, a favorable termination may take place by a critical defervescence at the end of the first or the beginning of the second week.

Prof. Hare advises the following combination in cases of *Eczema* with much induration, or in cases of *Psoriasis*:—

℞—Resorcin,
Zinci oxidi, ... ʒ ij.
Ung. aquæ rosæ . . . . ʒ iiss.—M.

Sig.—Apply locally twice a day.

Prof. Wilson says it has been frequently observed that women who have been suffering from *Amenorrhœa*, and have been attacked with influenza, have had their menses re-established after recovering from the attack of influenza.

THE TEMPERAMENTS.

It is interesting to find that so thoroughly scientific a man as Professor William Preyer has adopted the four-fold classification of temperaments made nearly two thousand years ago, namely, the choleric, sanguine, melancholy, and

lymphatic. The existence of one or the other of these temperaments may be descerned, he says in his work on "The Infant Mind," very early in the great majority of children—in the second quarter of the first year, beyond a doubt.

Nearly every one who has written about temperaments has gotten up a classification of his own; Galen had nine, Haycock gave six, Graham Brown seven, and others have got down as low as two. Modern writers use the word nervous for choleric and bilious for melancholic temperament. With these verbal modifications the old classification seems to answer all practical purposes, and individuals can build up combinations as needed.

Hutchinson defines temperament as the sum of the physical peculiarities of a man exclusive of his tendency to disease. This is not very satisfactory, though, perhaps, temperament is a thing a little too vague to be satisfactorily defined. In modern terms it may be said to be the peculiar way in which the individual reacts to the stimuli of his environment. There is no doubt that one class of persons react quickly and easily, expending energy profusely and often needlessly in their life work; others react hopefully and work buoyantly yet with less waste. We can thus distinguish the nervous, the sanguine, the melancholic, etc. A capacity to recognize and appreciate the importance of temperament used to be considered part of a sound medical training. It has been too much neglected in our pursuit of minutiæ with microscopes ond test-tubes. Our teachers of practical medicine might well revive its study.—*The Physician and Surgeon.*

Intra-Uterine Cauterization.—Sänger (*Centralblatt für Gynäkologie*, 1894, No. 25) in a paper on this subject, read before the Leipzig Obstetrical Society, criticizes sharply the generally accepted view that gauze when introduced into the uterine cavity acts as a drain. He believes that when the os is not stenosed the uterus drains itself, artificial drains simply acting to plug the canal and prevent the escape of the accumulated blood. The gauze only permits the discharge of a thin, watery secretion, but not the escape of purulent or viscid material and coagulated blood. There is neither disinfection of the uterine cavity, as Abel maintains, nor the establishment of permanent drainage, as claimed by Skutsch. It is only after the removal of the gauze that there is an escape of the retained secretion. The rise of temperature often noted is an indication of this retention. The expression "gauze drainage" is incorrect; it should be "gauze tamponade." The gauze simply dilates the cervical canal and sets up uterine contractions, thereby increasing the circulation in the uterus. After its removal drainage is better because the canal is more patent. There is no medicinal effect from the iodoform. The writer has had better results from the use of gauze saturated with a solution of chloride of zinc; in fact, he uses the gauze tamponade merely as a preliminary to cauterization of the endometrium. The real action of intra-uterine caustics has been generally misunderstood. Gynæcologists do not allow sufficient time for the caustic to act, but repeat the application at frequent intervals, without waiting for the slough to separate; hence frequently arise cicatricial stenosis and other bad results. Again, weak solutions are ordinarily used, such as tincture of iodine, acetic acid, dilute carbolic acid, and liquor ferri sesquichlor., which not only do no good, but, when frequently applied, often cause violent irritation and increase the local pain.

The writer's practice is to apply strong caustics at long intervals; fifty per cent. chloride of zinc, introduced on cotton (wound around a silver. probe), being suitable in all forms of endometritiss A narrow cervix, such as is often present in virgins or nulliparæ, is a contra-indication. In this condition, the writer first uses, experimentally, a weak solution of zinc (ten per cent.) or tincture of iodine. The strong solution is applied at intervals of from sixteen to twenty days, two or three such applications being sufficient to cure a case of ordinary catarrhal endometritis. Erosions of the cervix he formerly touched with fuming nitric acid every three weeks, but now uses instead the strong solution of chloride of zinc. The thermo-cautery is the ideal aseptic caustic in the treatment of erosions. The writer, of course, places curettage before intra-uterine cauterization as a means of treating endometritis.

In the discussion of this paper, Zweifel agreed with the reader that gauze did not really drain the uterine cavity. He had abandoned the use of iodoform gauze as a vaginal tampon in cases of hæmorrhage, preferring to use pledgets of cotton saturated with acetate of aluminium. Gauze introduced into the uterus checks hæmorrhage, but only in the same way as any foreign body, *i.e.*, by causing contractions of the organ. He was inclined to go still farther and to affirm that gauze when introduced into the peritoneal cavity acts purely as a tampon and not as a drain.

Döderlein expressed the same opinion with regard to the inefficiency of so-called uterine gauze drainage. He was opposed to the common practice of applying a caustic to the raw surface left after curettage. Iodoform gauze has no medicinal action within the uterus; the iodoform is simply mingled with the blood-clot and is not absorbed at all.

[We are glad to receive such weighty support of an opinion which we have held for some time, in spite of our habitual use of the gauze drain after curettage. Notwithstanding the emphatic commendation of this practice by eminent Ameri-

can gynæcologists, we have long been in doubt as to the amount of drainage secured by tamponade of the non-puerperal uterus, even after the cervix has been thoroughly dilated. In our experience, not only has a frequent slight rise of temperature during the first twenty-four hours after operation indicated retention of secretions, but drainage has only been free after removal of the gauze. Sänger's well-known iconoclastic tendency is supported by so much native keenness and common sense that we cannot afford to treat lightly his criticism of this generally-accepted practice.—ED.] —*Amer. Jour. of Med. Science.*

SALOPHEN AS AN ANTI-RHEUMATIC. — During the past year and a half I have frequently had occasion to make use of salophen in rheumatic affections, and with results so satisfactory that I am led to contribute these brief memoranda.

The first case in which I employed this remedy was one of muscular rheumatism affecting the muscles of the right arm and shoulder, and so painful that the patient was incapacitated from work and could dress himself only with great difficulty. Salophen was administered in ten grain doses every three hours, together with friction with turpentine liniment. The remedy was given dry on the tongue and followed by a swallow of water. The pain began to disappear within a few hours after its administration, and on the following day, aside from slight stiffness of the muscles, the patient was completely relieved. This favorable experience has been repeated in a number of other cases of muscular rheumatism, and it would seem that in this affection salophen is a most valuable acquisition to our list of remedies.

In acute articular rheumatism my results from salophen have so far been quite good, although my experience has been too limited to warrant positive statements. It has proved fully as effective as salicylate of soda, over which it possesses the following decided advantages: It is free from irritating effects on the stomach and intestinal canal, does not weaken the heart muscle, and does not produce disturbance of the nervous system. Aside from an abundant perspiration, which appeared within half an hour of its administration and was followed by a reduction of the temperature, it is devoid of after-effects. The patients were not nauseated, and did not complain of headache, ringing in the ears or vertigo, as so frequently happens with the salicylate. The cases treated were of moderate severity, and what impressed me most was the rapidity with which salophen relieved the pains and promoted the comfort of the patient. In the case of a very sensitive woman, who suffered from acute rheumatism of the one ankle and knee-joint, the pains abated considerably after the first three or four doses of fifteen grains, given at intervals of two hours, and she was enabled to enjoy a good night's rest. As regards the disappearance of the swelling and other symptoms, I failed to note any appreciable difference between the action of salophen and salicylate of soda.

Before closing, permit me to call the attention of your readers to the value of salophen in cases of tonsillitis. There is nothing surprising in this, since tonsillar inflammations occur so frequently in rheumatic subjects that there seems to be a distinct relationship between these affections. It has lately been my habit to prescribe in acute follicular tonsillitis five grain doses of salophen every two or three hours until the pains and discomfort were relieved, and then at longer intervals. Here also I noted the analgesic and sedative properties of the remedy, the pains and irritation in the throat usually yielding rapidly to its influence. In cases attended with marked fever I usually combined three to five grains of phenacetine with the first two or three doses of salophen, and found this combination very effective.—P. J. Rosenheim, M.D., in *Times and Reg.*

THE SIGNIFICANCE OF THE VENOUS PULSE.—Dr. James Mackenzie divides the venous pulse into two forms, the auricular and the ventricular. The former, he says, presents distinct evidence of the functional activity of the right auricle. In this form there is also a wave due to the ventricle, and as it increases the auricular wave decreases and finally disappears, and thus the ventricular venous pulse is developed. The latter form is a more advanced stage than the auricular, and, as during its development there is a gradual fading of the auricular wave, there is a period when such terms do not sufficiently denote the character of the pulse; but the terms are convenient for descriptive purposes. The ventricular venous pulse appears only when there is organic disease of the heart itself (most commonly in valvular disease). When failure of the heart is functional and not due to organic disease of the valves, the auricular pulse persists to the end. Similar types of pulse may be recognized in the liver. Here the pulse appears only when there is organic disease of the heart. In many respects, says Dr. Mackenzie, more information regarding the various cavities of the heart can be obtained from the study of the venous pulse than from that of the arterial pulse. Thus, during a cardiac revolution the arterial pulse is in free communication with but one chamber, the left ventricle, only a portion of the right auricle during its systole and its diastole may be observed, while the time of the appearance of the ventricular wave gives information regarding the degree of incompetence of the tricuspid orifice. Information may be gathered regarding the exact time of closure of the pulmonary valves, and the

persistence of the ventricle in systole for a short time after the outflow through the arterial orifices has ceased may be noted. There is also distinct evidence of the diastole of the right ventricle in the venous pulse. In heart failure the venous pulse affords information of a kind entirely different from that supplied by other means.

Its appearance, increase, decrease and disappearance may give evidences of changes in the blood-pressure inappreciable by any signs given by the arterial pulse. While, as a general rule, an increase of the venous pressure implies a diminution of the arterial pressure, that nevertheless, is not always the case. Although in some cases the disappearance of the venous pulse is a sign of the restoration of the body to a healthier condition, yet in other cases it may precede a fatal termination. In these last cases there is also a failure of arterial pressure. In pulse irregularities no true knowledge of the action of the different chambers of the heart can be obtained except by the study of the venous pulse, and this study, says the author, throws a new light upon the heart's movements, and reveals a variety of them hitherto unsuspected.—*New York Med. Jour.*

THE RACIAL FACTOR IN PATHOLOGY.—The influence of race as it affects predisposition to certain diseases or immunity therefrom is still very imperfectly understood. It is generally believed that the negro races show a special proclivity to tuberculosis and cholera, and they are also particularly liable to tetanus. On the other hand, they enjoy comparative immunity from cancer, malaria and yellow fever, and are seldom attacked by diphtheria or dysentery. The yellow races are very prone to ophthalmia and myopia, and insanity is said to be relatively more common among them than among other races; on the other hand, they show greater proclivity than the black races to tetanus, while they are more subject to tuberculosis and cholera than white races. Among white races and Europeans, M. Bordier, who has recently studied the subject, points out that almost the only observations recorded relate to the Jewish race, which exhibits a special predisposition to diabetes and nervous disease, while, on the other hand, it appears to enjoy some measure of immunity from croup. The population of France, as is well known, is made up of three great ethnological divisions, corresponding more or less closely to those found by Julius Cæsar: north of the Seine, the Belgians; in the centre between the Seine and the Garonne, the Celts; and in the south to the Pyrenees and the Mediterranean, the Aquitanians and Ligurians. These three divisions present certain differences in stature, complexion, etc., which are the marks of a different origin. Thus in the north the men are well grown, dolichocephalic, fair and blue-eyed, while in the centre and the south they are short, brachycephalic, and dark in complexion. As showing the difference of stature, the rejections among conscripts on this account in the Belgian part of France from 1831 to 1860 (when the minimum stature for military service was 1.56 metre) were from 24 to 56 per 1,000, whilst in ancient Aquitania and Liguria the proportion was from 57 to 81 per 1,000; in the part of France corresponding to Celtic Gaul from 84 to 174. It was, therefore, in the north-eastern part of France where the population is Cymric that the rejections for defect of stature were least numerous. The people of the east, in French Flanders and in Picardy, have fair hair; those of Brittany and Anjou have chestnut hair; those of Auvergne and Haute-Loire, black hair. In Cymric women the breast is conical or pear-shaped, while in Celtic women it is globular and rounded; the latter begin to menstruate earlier. In the Cymric element in the French nation the pulse is normally more rapid than in Celts, and the northern races are more long lived than those of the south. Velpeau remarked, at the time of the Crimean war, that the English soldiers recovered better from wounds and from operations than the French. The French soldiers themselves used to say the English "flesh" was different from theirs. Statistics show that tuberculosis is more frequent in the north than in the south of France. Myopia is more frequent in ancient Aquitaine and Liguria; caries of the teeth and varicose veins in the Cymric departments; hernia in the Norman departments. The Cymric seem to have a special tendency to sweating sickness.—*Ed. Brit. Med. Jour.*

SKIN GRAFTING.—Having washed the healthy granulations with mercuric bichloride 1 to 3,000, or carbolic acid two per cent., and the part furnishing grafts with 1 to 1,000 bichloride, and lastly with distilled water, instead of lifting the skin with a needle, or instrument which injures the graft, I have a sharp pair of straight scissors with two inch cutting blade. I press the open scissors upon the skin sufficiently to bulge the integument between the blades, and gently close, catching one end of the skin, and then increase or lessen pressure according to the thickness of the bulging skin, and at the same time cut. In this way I can secure a graft from a millimetre to a centimetre long; taking only the epidermis. The graft is then lifted by a fine pair of tweezers from the blade of the scissors, and placed, cut surface down, on the granulations. Instead of applying protective of pure rubber or gutta-percha tissue, and over the productive a wet compress followed by oiled silk, a pad of absorbent cotton and bandage, I simply strap the grafts, after having them exposed fifteen to twenty minutes, with adhesive plaster. The strips are applied basket fashion,

as one would strap an ulcer. If a discharge is to be anticipated, we may leave a small opening in the plaster to favor drainage, removing the straps in thirty-six to forty-eight hours, or we may remove the straps in ten hours, and allow distilled water to trickle over the grafts, then re-applying the adhesive plaster. I now put on one or two turns of bandage, sometimes putting one layer of iodoform gauze between the strap and bandage.

The advantage of the adhesive plaster is threefold, viz.: 1. You can press the grafts so tightly into the healthy granulations that they cohere so that no discharge can lift the graft from the granulations. 2. No dressing will hold the grafts in place, keep the parts at rest, and lessen the discharge so well as straps applied in this way. 3. In removing the dressing there is no danger of the grafts clinging to the plaster, as the moisture collects between the strap and graft, preventing adhesion. Even after subjecting the tissues to an injection of cocaine (four per cent.) I have dissected off grafts two centimetres square, and they rarely fail to live when dressed this way.—*Med. Record.*

THE GRAVITY OF HYSTERIA.—In some diseases the patient has the sympathy of the family, friends, and ofttimes even of the physician, while in other diseases that virtue is obtained from all except the physician. Hysteria is a diseased condition which usually elicits little sympathy from the practitioner of medicine, and Dr. Gustavus Eliot thinks we do not pay it sufficient attention, and attempts to show in the *New York Medical Journal* what the gravity of this condition is.

Sir Thomas Watson considered it a distressing disease, but never fatal, and indeed it always left the patient with no lesion of mind or body. Whatever the physician may think of any disease, he should never underestimate it, and in this case it is a question says Dr. Eliot, if hysteria has not been considered too lightly. Rough means may abort an attack and banish all sympathy for the patient, but such attacks leave an impression on the woman, and this disturbance of the nervous system may lead on to neurasthenia, neuralgia or melancholy. The hysterical woman who marries may bring up children with epilepsy, or even insanity.

Dr. Eliot thinks it a mistake to say that persons do not die of hysteria. They do. It is also well to pay more attention to the disease and show more sympathy and less brutality. It is true that physicians feel provoked at some hysterical patients, still it is rare for a man with tact to spare sympathy in such cases, for aside from everything else such cases, while being very troublesome and annoying, are a constant source of revenue, and proper care and sympathy, even if care does not follow for a long time, bring great credit on the physician's head, and such tact and skill are appreciated. Dr. Reed says in conclusion that it should never be forgotten that:

1. Hysterical manifestations indicate an abnormal condition of the nervous system.

2. This condition will be aggravated if the patient is not properly treated.

3. Prolonged or frequently repeated attacks may inflict serious and permanent damage upon the nervous system of the patient.

4. As a consequence, a tendency to functional disorders of the nervous system may be transmitted to the children and grandchildren of the patient.

5. Serious symptoms and even death may be caused by hysteria.

TEMPERANCE BIGOTRY.—We are indebted to the Penzance Board of Guardians for a fresh proof of the fact that even the extreme of virtue constitutes a species of vice and a cause of mischief. In their case (almost the whole Board are teetotalers) a love of abstinence in respect of alcohol has deepened into an obstinate and exclusive devotion. Recently they forbade its introduction to the workhouse, and they confirmed this arbitrary measure by refusing to defray the cost of a bottle of champagne purchased for the use of an inmate by their medical officer. The latter, however, insisted upon his right to prescribe this remedy if needful, and effectually vindicated his position. As a consequence, there were laid in for use on occasion two bottles of brandy and one of champagne. The Guardians are scarcely to be congratulated either on the moderation of their views or on their penny wisdom. We yield to none in our advocacy of temperance or of total abstention from alcoholic stimulants where this is called for. The case before us, however, touches another subject—that of illness. There are times at which alcohol is in this relation an important medicinal agent. As such, it is known to exert a definite influence upon the course of nutritive changes in the body, which is for certain purposes wholesome and beneficial. It is useful in many states of exhaustion, and invaluable at times of emergency on account of its convenience. In losing it we should part with an effectual aid to recovery and one of our best means of maintaining the functions of old age. No other known substance can exactly or adequately fill its place as a remedy, and we trust, therefore, that the day is far distant when its legitimate use in this way will be hindered by the misdirected zeal of teetotal authorities.—*Ed. Lancet.*

THE ULTIMATE RESULTS OF THE TREATMENT OF RETRO-DISPLACEMENT BY PESSARIES. — Dr. Francis Devenport, of Boston, selected this as a subject for his remarks. There was no doubt

that there were certain objections to pessaries, but were they not exaggerated? Most persons could wear a pessary without discomfort, and all that was required was a certain amount of skill in the fitting. Many objected to them on the ground that they required frequent attention from the physician; again, that they were a foreign body, and necessarily unpleasant; and also that they did not cure and would have to be worn for the rest of the patient's life. He gave the history of fifty selected cases of retroversion that had been treated by pessary. Ten were completely cured and the uterus was in a normal position. Nine were benefited and symptomatically cured. Thirty-one patients now went without the pessary; their uteri were in normal position, but they still had some symptoms. This treatment gave twenty per cent. of absolute cures. Of the ten cured patients seven wore the pessary a year and a half. The shorter the displacement had lasted the quicker the cure. He thought that these results were worth trying for, and where many patients objected to operation a fair trial of several months or a year should be given to the pessary.

In summarizing Dr. Devenport said that in cases of uncomplicated retroversion or retroflexion of the uterus the choice lay between shortening the round ligaments and the wearing of a pessary. That a cure, either anatomical or symptomatic, could be assured. Where a cure was effected it took place usually in about a year. A large proportion of those not cured could wear a pessary and did not want an operation. The operation for shortening the round ligaments should be limited to those who could not wear a pessary or in whom vaginal treatment was inappropriate, and as a supplementary proceeding to other operations.

Dr. E. W. Cushing thought that the usual statistics given on this subject were valueless. He thought that it was too often that the symptoms were treated and not the cause. He was satisfied that few cases required Alexander's operation. If, after fair trial of every form of treatment, including pessaries, the uterus would not remain in position and the symptoms were not cured, then the abdomen should be opened and the trouble looked for and corrected.

Dr. Clement Cleveland, of New York, said that he believed in the use of the pessary and in the Alexander operation, and thought that there was a field for each. The pessary was chiefly useful in retro-displacements. A most beneficent operation was the Alexander, and he believed that it had come to stay. It had always proved a success in the speaker's hands, and he had done the operation over forty times with most gratifying results.

Dr. G. M. Edebohls, of New York, said that the discussion was as to the relative value of the Alexander operation and pesseries. He maintained that the only cases where pessaries could be used was where there were no adhesions and where the tubes and ovaries were in a normal condition. In the other class of cases, which were by far the largest, it was his plan to shorten the round ligaments. He had operated in this manner seventy-five or eighty times and in not one had the uterus returned to retroversion. There was always an anatomical cure, but not always a symptomatic one.—*N. Y. Med. Jour.*

THE BICYCLE AND FEMALE PELVIC ORGANS.—"The Effect of Bicycle Riding on the Female Pelvic Organs," was the title of a paper read by Dr. James M. Craighill before the Gynæcological and Obstetrical Society of Baltimore, which recently held its sixty-fifth meeting. In the course of the reading he said that he believed the exercise to be beneficial to women, and gave as his reasons for so thinking the following:

Nothing will more rapidly improve that class of anæmic women which every medical man meets in his daily rounds suffering from backache, ovarian pain, leucorrhœa, etc., caused by a general relaxed condition of the pelvic organs, in unison with her general run-down condition, than proper exercise, and it is the custom among physicians to advise women suffering in this way to exercise in the open air, this being regarded as much more likely to do good than the various tonics that are prescribed in such cases. The exercise usually consists of a walk of possibly a mile for the first day or two, but, becoming tiresome, it is not tried long enough to do good; if our patient is put on a bicycle she soon becomes very enthusiastic, and indulges whenever an opportunity presents itself, and, if properly instructed, wears loose clothing, with no corsets, sits erect on her wheel exercising every organ and muscle in her body, and as her course naturally leads her out of the city, she gets the benefit of the pure country air, and her exertions make her breathe in much larger quantities than ordinarily, thus purifying her blood and adding health and strength directly to that part of her body to which our attention is directed in this paper. This a very different picture from her sister bending over a sewing machine, usually in a close room, with her corsets drawn tightly, crowding all of the abdominal contents down on her pelvic organs, with the subsequent congestion and the many female troubles with which we are all familiar.

Of course there are many conditions of the female organs that would prohibit this exercise which are unnecessary to mention, although it is customary with some to ride during the menstrual period, and apparently with no harm resulting, but the writer of this paper would include riding at that time among the abuses.—*Dietet. Gaz.*

So Have We.—A Kentucky doctor writes as follows to the *Louisville Medical Monthly*: "The hungry and unprincipled learned physician does more harm than an honest one of less capacity. He tramples upon your feelings; he lies to your people; he makes capital out of your labor; he boldly takes possession of a case when he is accidentally called upon; he introduces a speculum, and tells your patient she has lacerated cervix, from carelessness of her attendant; he calls, or sends wife (who belongs to the same euchre club, or church), to see how she is getting along. You call him in consultation, and he drops in socially afterward, just because he was passing. You can't lance a boil; you must send for the surgeon (who treats measles, whooping-cough, and obstetrical cases). This surgeon is your friend socially, but takes your cases, and when called in your place, tells the family how he would have treated the case if he had seen it in time. A plain case of bellyache is now a case of appendicitis, and the regular family doctor is 'not in it.' All kinds of ovarian troubles meet with prompt removal at the hands of some so-called specialist. A family doctor can't set a common fracture, and if he does, on his return call he finds this so-called surgeon has taken off his dressing, and has dressed it himself, with the excuse to his friend, the family M.D., that he had to, as the family asked him. You are called to a man hurt in a railroad accident, or at a fire, and spend all night ministering to his sufferings; next morning you are called to the telephone, and notified that the railroad or fire department doctor will take care of your patient, as he is paid by the company, and you can take a walk. I have met with all the above abuses time and again, and I have always kept my temper, remembering a physician should be a gentleman. But I have changed my mind, and this is about what I intend to do: take the next unprincipled doctor by the neck, and make him think that old Drs. Kellar, Gilpin and Ross are still alive. Yours, etc., F. E. Corrigan, M.D."

The Management of Face Presentation.—Davis *(Medical News)*, calls attention to the frequency of face presentation, occurring in one hundred and thirty confinements, according to the German observers.

The treatment best adapted to secure spontaneous labor in face presentations consists in retaining the membranes unbroken until the time of spontaneous rupture; in sustaining the strength of the patient, and conserving her energies by suitable feeding, stimulation, and anodynes; and placing her in such a posture as will favor the rotation of the chin anteriorly. The patient should be placed on the left side, with flexed thighs, if the face looks to the left side of the mother's pelvis, and *vice versa*.

The uterus should be brought as nearly as possible with its long axis corresponding to the long axis of the mother's body during labor-pains. If this be carried out, it is quite possible for a face presentation to be spontaneously changed into an occipital one, and for the occiput even to rotate spontaneously to the front. When dilatation is complete, the obstetrician is to choose between radical interference by version or an effort by the method of Baudelocque and Schatz, to correct the face presentation by converting it into an occipital one. This will depend upon the size and shape of the mother's pelvis, the comparative size of the child's head, and the condition of the pelvic floor. When no disproportion exists between the head and the pelvis, and when the pelvic floor, although elastic and resistant, offers no undue obstacle to the mechanism of labor, it is certainly proper to allow the head, under good labor-pains and with good extension, to come down upon the pelvic floor in face presentation, and thus an opportunity be given for the mechanism of labor to proceed spontaneously. Should there be a disproportion between the head and the pelvis, as evidenced by pelvic proportions less than the average, ascertained by pelvimetry, or a large fœtal head, as ascertained by palpation, and a thorough vaginal examination under an anesthetic, the case becomes quite different. Davis believes it the duty of the obstetrician to completely change the position, if the pelvis be roomy, by podalic version under anæsthesia, by chloroform, or in so enlarging the pelvis that the mechanism of labor in face presentation can continue.

Podalic version is, in well-selected cases, a prompt and efficient method of treatment. Symphyseotomy, he believes, is a procedure of too recent a date to occupy an established place in these cases.—*Univ. Med. Mag.*

Tuberculosis and Butter.—It is hard to get away from the malign influence of the cow. Such at least is the case if we may trust the investigations of bacteriologists and sanitarians. The statistics of slaughtered animals in Prussia, Hanover, Switzerland, and other European countries show that from two to twelve per cent. of the cattle are tuberculous, and though their flesh is not often dangerous, yet the milk must in most cases have been so. We can guard against tuberculous milk by sterilization, but now danger is threatened us from the butter. Several years ago Heim showed that butter from tuberculous milk contained bacilli and could produce infection. Bang (*Deut. Zeitsch. f. Thiermed.*, vii., p. 5) reached similar conclusions.

Professor Roth, of Zurich, has, however, recently made experiments of more striking significance (*Correspond. bl. f. Schweit. Aertz*). He went into the markets and purchased butter from twenty

different sources representing different cantons of Switzerland. He then inoculated guinea pigs with this butter. In eighteen series of experiments the results were negative, but in two the inoculations were followed by tuberculosis. In other words, ten per cent. of the butter of the Swiss markets contained tubercle bacilli.

Quite independently of Roth, Dr. Brusaferro, of Turin, made experiments with the butter of the Italian markets. In nine tubs he produced infection once, which gives about the same proportion as Roth's. It is not to be supposed that ten per cent. of market butter is necessarily dangerous, for in many instances the number of bacilli is small and quite unable to cope with the juices of the stomach. Still, infected butter is not safe to the predisposed, and the fact of its existence in Europe at least should be borne in mind. What makes the matter additionally serious is the fact that there is not, so far as we know, any practical way of sterilizing butter.—Ed. *Med. Record.*

THE TREATMENT OF TAPE-WORM.—Dr. Leslie Ogilvie attributes the frequent failures in the attempt to remove a tape-worm to a lack of attention to details in the administration of the drug used. When the purgative is given soon after the anthelmintic, the worm is carried away, all but the head. In such cases it is useless to repeat the drug, as is frequently done, in a short time, as the worm offers but scanty absorbing surface, and the chief effect of the drug is to poison the patient. Neither does he consider castor oil a suitable purgative to give before the administration of the anthelmintic, as there is in all probability a considerable coating of mucus about the worm which the oil does not remove. Sulphate of magnesia with tincture of jalap he considers the most efficacious preliminary purgative. He conducts his case as follows, and reports thirteen consecutive cases successfully treated, ten of which had been previously treated without result. The patient should eat less than usual for a few days before treatment, and the day before should be restricted to a milk diet with a little stimulant. At bedtime a purgative draught of sulphate of magnesia and tincture of jalap is given, and repeated at 7 the next morning if the first dose has not operated. At 8 a.m., a drachm of fluid extract of male fern is given, and at 9 o'clock a second dose. At 11 o'clock a dose of castor oil is administered; even if the worm has been passed previously, it is well to give the oil to remove any of the poison which may be left. The physician should pay a visit soon after the second dose of male fern has been given, not only to observe the patient, but to inspect all the motions, each one of which should be passed into a separate utensil. In searching for the head it is convenient and less unpleasant to use a dilute solution of permanganate of potash as a disinfectant with which to separate the worm from the feces.—*Boston Med. and Surg. Jour.*

A NEW METHOD OF TREATING FRACTURE OF THE LOWER END OF THE RADIUS.—Prof. Ferd. Peterson, *Hospitals-Tidende*, recently demonstrated a method of treating Colles' fracture which is astonishingly simple. An ordinary roller bandage is applied to the forearm down to or near the place of fracture, and the arm placed in a sling with the hand in ulno-volar flexion over the edge of the same. The hand hanging down by its own weight keeps the fragments in position. He claims that excepting in complicated cases, or in those of a low degree of intelligence (drunkards, etc.), this method has the advantage of having the site of the fracture constantly in sight, the callus has free opportunity to develop, and healing takes place more rapidly than with other methods; active and passive movements may be begun earlier, and no stiffness of the fingers is liable to follow. The lightly constricting bandage aids callus formation by the slight venous stasis which it induces. In typical cases he regards it as the best method. He demonstrated a case of lower radial fracture in a physician before the recent Surgical Congress at Berlin, where healing had smoothly taken place in the three weeks. In eight other cases healing took place in one in eight days, in two in ten days, in three in fourteen days, and in two in three weeks. Only in one was there a slight thickening and dislocation of the fragments, in the others the result might be called ideal.—*Lancet-Clinic.*

THE "SOUL" HAS LOST ITS SEAT.—The abstract theory advanced by "Descartes" that the pituitary gland is the seat of the soul has at last been exploded, and the proper functions of the gland demonstrated almost beyond a doubt. A summing up of the researches of many experiments upon the lower animals and of observed symptoms in human beings in whom the pituitary body presented pathological conditions upon section, goes to show that the pituitary is a trophic gland to the nervous system, regulating the chemical composition of the ventriculo-spinal fluid by supplying needed neutralizing acids and eliminating the products of oxidation and metamorphosis.

In rabbits deprived of the gland and in human beings where the gland had undergone pathological changes a marked swelling of the head and thickening of the skin with trophic changes, "akromegali," were observed. The following additional symptoms indicating auto-intoxication of the organism from deficient cerebral metamorphosis and elimination of the products of oxidation were observed in human beings: 1. Headache (frontal); 2. Sense of suffocation; 3. Digestive

disturbances; 4. Eye-symptoms, first in one, then in the other eye, such as amblyopia, hemianopia, permanent or intermittent amaurosis, strabismus, ptosis and exophthalmia; 5. Dulness and apathy; 6. Impaired memory; 7. Motor disturbances of the muscular system; 8. and, finally, death by coma.—*Pacific Med. Jour. Trans.*

INTRA VENOUS INJECTIONS OF CORROSIVE SUBLIMATE.—The success of intra venous injections of quinine in grave forms of malaria induced Bacelli to try the same plan in cases of syphilis, using corrosive sublimate. Two cases of cerebral syphilis, which had resisted ordinary specific treatment, were treated in this way with excellent results. The method is as follows: The skin is first rendered aseptic, and a ligature is placed around the arm, and one of the veins at the bend of the elbow is selected, in which the following injection is made:

R.—Bichloride mercury, . . . 1 gr.
Chlor. sodium, ... 3 grs.
Dist. water, ... 1000 grs.

The hypodermic syringe is filled with the solution, the needle carefully inserted, and the injection made slowly. The patient in a few seconds notices a salty, then metalic taste in the mouth, and in five or six minutes an increase flow of saliva. The commencing dose is a cubic centimetre of the $\frac{1}{1000}$ solution each day (1 milligramme). This may be increased to 2, 4, and even 8 milligramme, which is the maximum dose. The advantages claimed are: 1. Small quantity of drug. 2. Rapid action on the symptoms, which show the syphilitic condition of the blood. 3. Quick and direct action on the walls of the vessels, one of the chosen seats of specific lesions.—*Annales de Med.*

SELECTION OF GLASSES FOR DEFECTIVE EYES.—Dr. Charles W. Kollock, of Charlestown, S. C., in summing up a very useful article (*Trans. S. C. Med. Assoc.*, 1894) says:

1. Ascertain as nearly as possible the general condition of the patient; and then test the refraction—preferably while the eyes are under the influence of a mydriatic (atropine).

2. Then, according to the condition of the eyes, the general health and occupation, advise the glasses that are most useful and comfortable.

3. For correcting squints and abnormal muscular relations, rely first upon the proper correction of refractive errors, exercise the orbital muscles with prisms, and finally perform advancement or tenotony.

4. Glasses should be used as long as their good effects last. In progressive myopia, astigmatism—simple or compound—and in high degrees of hyperopia, their employment should be constant. In slight degrees of hyperopia, complicated by weakened accommodation, or in cases of emmetropia (normal vision) when the accommodation has been weakened, it will frequently be found that the glass acts as a tonic, and may be laid aside after the normal tonicity has been recovered.

Dr. Kollock has seen a case of blindness caused by suppression of the menses. Vision quickly became normal after re-establishment of the function.—*Virginia Medical Monthly.*

CROUP. — To summarize briefly the medical treatment of croup that will give the little victim the best chance of recovery is as follows: A warm room, the air of which is to be saturated with moisture; an emetic of turpeth mineral (hydrarg. subsulph. flav., gr. 2 to 5 to a child two years old), *to be repeated whenever the respiration becomes embarassed*, if the bowels are constipated, a sufficient amount of mild chloride of mercury to move them thoroughly; ice to the throat, either in a rubber bag or bladder; if thirst exists, pellets of ice internally; quinine *to decided cinchonism, which is to be maintained;* a sufficient amount of hydrate of chloral to allay spasms of the air passages, with decided doses of belladonna; the inhalation of steam, medicated or not, as may suit the peculiar belief of the individual practitioner; the juice of the pineapple, trypsin with carbonate of soda in warm water; to be supplemented by the administration of a suitable amount of easily digested food.—*Med. Brief.*

ABORTIVE TREATMENT OF GONORRHŒA BY PERMANGANATE OF POTASH.—Large injections of permanganate of potash methodically used, is the best method of treatment yet introduced. Its advantages are, being absolutely painless in cases of anterior urethritis, and scarcely painful in cases of inflammation of the whole tract; it can be commenced or left off without inconvenience; it has no detrimental action on the mucous membrane, but suppresses every trace of discharge from the first lavage, and is successful about eleven times out of fifteen. The size of the injection, its frequency and strength, must be adapted to individual cases. Generally, strengths of 1 to 4,000, or 1 to 2,000, or even 1 to 1,000, are tolerated.—*Times and Register.*

TRAUMATIC PERITONITIS IN CHILDREN.—Dr. G. Frank Lydston says:—1. I do not believe in acute primary idiopathic peritonitis. 2. The majority of cases of so-called idiopathic peritonitis in children will be found upon inquiry to be traumatic. 3. Slight injuries of the abdominal wall are relatively more dangerous in children than in adults. 4. Surgical interference is indicated in all cases of severe general peritonitis and cases of localized supurative peritonitis.—*Maryland Med. Jour.*

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OLIVER WENDELL HOLMES, M.D.

In an old almanac of the year 1809, kept by the Rev. Abiel Holmes, against the date August 2nd, is the simple entry, "Son born." Within the last month nearly every newspaper and journal in America has made a biographical reference to the son, regarding whom that old entry was made. What need to repeat here the details so often given. To very many of the readers of the CANADA LANCET the announcement of Dr. Holmes' death must have come with something like a sense of personal bereavement. And yet not half a dozen in our craft are living to-day, who can remember when he began his life-long task of bringing the profession of medicine into pleasant, agreeable contact with society at large. More than any man who has ever lived, Dr. Holmes has morial has existed between the medical profession bridged over that chasm which from time immeand the world.

By his life he illustrated the important lesson, that he who becomes distinguished as a physician need not remain a slave to his calling, or see things only from one point of view, but that he may, while maintaining his position, become a leader in ethical culture, and an ornament to literature. Emancipated, as he fortunately was, from the need of earning a livelihood, as well as from the drudgery of practice, his many-sided genius made it easy for him to become, while, perhaps, never a great anatomist, certainly the best teacher of anatomy on this side of the Atlantic. At the same time he was building an enduring fame as poet, essayist and philosopher. If wit is the highest wisdom, as in its best form it certainly is, how much this century has to thank him for! Very truly he

> "Never deemed it sin to gladden
> This vale of sorrows with a wholesome laugh,"

and that warmth of nature which brought him into sunny contact with the whole world, made even the pessimist and the misanthrope laugh with him.

Dry bones lived again when he described them, and his old students bear willing testimony to the fact that his happy illustrations made it the easier to grasp and to retain the full significance of what he taught. One of their number, referring to his dual allegiance to science and literature has written of

> The doctor-poet so doubly stored
> With science as well as with native wit
> *Poeta nascitur*, you know *non fit*
> Skilled to dissect with knife or pen,
> His subject dead or living men;
> With thoughts sublime on every page,
> To swell the veins with virtuous rage
> Or with a syringe to inject them
> With sublimate to disinfect them;
> To show with demonstrative art,
> The complex chambers of the heart,
> Or, armed with a diviner skill,
> To make it pulsate at his will;
> With generous verse to celebrate
> The loaves and fishes of some giver,
> And then proceed to demonstrate
> The lobes and fissures of the liver;
> To soothe the pulses of the brain
> With poetry's enchanting strain,
> Or to describe to class uproarious
> *Pes hippocampi accessorius*;
> To move with fervor of appeal
> The sluggish muscles into steel,
> Or, pulling their attachments, show
> Whence they arise and where they go;
> To fix the eye with wit consummate
> Or draw the aqueous humor from it,
> In times of peril give the tone
> To public feeling called back-bone,
> Or to discuss that question solemn
> The muscles of the spinal column.

All the world knows that for thirty-seven years he was Professor of Anatomy at Harvard, that some of the poems which he has written—"The Chambered Nautilus," for example—are as perfect as any in our language, and that the wit, the wisdom and the unsurpassable grace of the Autocrat Series has given him an *open sesame* into hearts and homes everywhere. But it may be doubted if as generous and universal recog-

nition is given by our profession to the fact that he first demonstrated puerperal fever to be a private pestilence, a something which has been carried to the patient who develops it, by her physician, by her nurse, or by someone else. He ante-dated by four years the similar announcement for which Simmuelweis is now being so greatly honored. Dr. Holmes' professional writings have been collected into one volume, called "Medical Essays," and medical literature contains very few books at once so entertaining, so suggestive and so instructive.

With his right to be classed as one of the five great and distinctively American, poets a medical journal has perhaps but little to do. He lived his life in touch with all the people, and for very many years the recognition of his place in literature has been as universal as the reverence felt for his name and character.

In the best sense of the word Dr. Holmes was a book-lover. He was President of the Boston Medical Library for a long period, and to that institution he presented his own medical library about six years ago. When it was proposed to begin the collection of a medical library for the use of the profession here in Ontario, he sent over a specially bound copy of his own contributions to medical literature, and ever since then his interest in the growth of our library has been unflagging, and to him, as well as to Drs. Jas. R. Chadwick and E. H. Brigham, the librarians, we are under obligation for assistance given in many ways, and for valuable contributions sent. Dr. Osler is the only other correspondent on our list who has seemed to have the interests of the Ontario Medical Library always on his mind.

In rare degree Dr. Holmes mastered the art of growing old gracefully, and in his case the prayer contained in William Winter's poem was fully answered—

> True bard, true soul, true man, true friend,
> Ah, gently on that reverend head
> Ye snows of wintry age, descend;
> Ye shades of mortal night, be shed!
> Peace guide and guard him to the end,
> And God defend!

Dr. T. P. McCullough has sold his practice at Everett to Dr. C. M. Kingston, of Sterling, and will in future devote his attention to diseases of the eye and ear. He will study in New York.

CASTRATION FOR ENLARGED PROSTATE.

The fact that the prostate resembles very closely the uterus, as to its structure, and that hypertrophy of the male organ is due largely to the development within it of separate tumors strikingly resembling uterine fibro-myomata, has suggested the likelihood of castration bringing about an atrophy of the prostate. The overgrowth is almost entirely due to increase in size of the fibrous and muscular constituents, the glandular elements undergoing little or no change; but the tumors may vary in size from that of of a pea to a child's fist.

Now, as uterine tumors do not appear after the cessation of active sexual life in woman, and those which may be already existent, usually, if not always, undergo atrophy, it was suggested long ago, by Velpeau, and the idea was afterwards taken up by Sir Henry Thompson, that castration should, reasoning by analogy, be followed by atrophy of the prostate. It has always been known that hypertrophy of the so-called gland occurs at that period of life when sexual power is waning, though not entirely extinct. The figures are that one-third of all males over middle age show an enlargement, while in one-tenth of all males over 55 this enlargement is so great as to become pathological. Now we should expect that if castration induces atrophy, so also would the total cessation of sexual life. Some authors state that such atrophy really does take place, but inasmuch as the condition of hypertrophy so often tends towards the early death of the sufferer, observation in this direction has been limited.

The treatment of enlarged prostate, with all its attendant train of vesical troubles, has never yet been very satisfactory. Harrison's *brochure* of a few years ago, showing the feasibility of keeping the channel patent by early and constant catheterization, and thus avoiding bladder trouble from retained urine, has not had much effect upon practice in this disease. Again, prostatectomy in any of its forms, is a very serious operation, especially if undertaken as it usually is, when the patient's strength is greatly lessened by the long-standing disease. The bladder may also be drained, as is done by Harrison, by intro-

ducing a straight trocar and canula, in the middle line of the perineum about one inch in front of the anus, and pushing it through the prostate till the bladder is reached. Then, by introducing a self-retaining catheter, permanent drainage is secured; and some cases have been reported in which, after such operation, permanent shrinkage of the prostate occurred.

Castration seems to be the safest and surest means of securing atrophy of the organ. Dr. White, of Philadelphia, in 1893, *Bost. Med. and Surg. Jour.*, found that castration in a series of cases caused rapid atrophy, first of the glandular structure, and then of the muscle. He has reported a number of castrations in various parts of the country, by different surgeons, himself included, in all of which decided benefit accrued, and in several, an actual restoration of the healthy function of the bladder was the pleasing result. If further observation prove the truth of the above reported cases, then we shall have at our command an operation which, while almost necessarily limited to the latest period of life, might with profit be taken advantage of by men in whom virility is not entirely lost, looking forward to the greater comfort of later years and to the almost certainly longer span of life they would enjoy, by the loss of the usefulness, for procreation at least, of what Burns called their "dearest member."

ANTITOXIN TREATMENT OF DIPHTHERIA.

In our last number we gave an extract on the dry bones of what many of our readers no doubt considered a dry and ultra-scientifiec subject. But the medical world to-day is ever on the advance, and what may appear to many foolishness to-day, will, perhaps, in the course of a decade, be the foundation-stone in a great and grand medical edifice, by which disease shall be kept in check and even defeated. The antitoxin movement has not yet assumed the proportions, nor excited the comment, by the thousandth part, that did the "Koch craze," now in oblivion, yet containing, we believe, a germ of scientific truth which may some day grow to magnificent proportions.

All humanity is credulous. The medical man should be less credulous in matters relating to medicine and reputed cures than anyone else; yet we are all ready to accept the wonderful, all are glad to learn that someone has, fortuitously or not, found a panacea for some malignant disease.

When we consider the number of drug cures for diphtheria, specific in their nature, which have been held up to the wondering gaze of the profession in the past ten years, need we wonder if some of the older practitioners hesitate to exclaim, "He has found it."

Those who laud antitoxin hold, substantially, that immunity to the disease may be produced, in a similar manner as that in small-pox, by inoculation. But it yet remains to be shown how long this immunity shall last, whether, as in small-pox, for a term of years, or for only a few months, as is the case of the immunity to tetanus in guinea-pigs. No doubt many a parent would be willing to submit his child to an innocuous (and it is said to be entirely innocuous) injection during a serious epidemic, or after he was certain exposure had obtained.

As to the second object sought, viz.: cure after the disease has been established, increasing numbers of cases seem to point to the power of the procedure to lessen the fatality. With a summary of these reports we need not trouble our readers, but would say, from a consideration of the whole matter, from knowledge gained from a large number of reports, that the time is not yet, to sit in judgment upon the process; with a personal leaning to the greatest care being exercised in the using of it, for we fear that in a year or two it will be among the things that are not.

THE MORNING VISIT.

BY O. W. HOLMES, M.D.

A sick man's chamber, though it often boast
The grateful presence of a literal toast,
Can hardly claim amidst its varied wealth,
The right, unchallenged, to propose a health.
Yet though its tenant is denied the feast,
Friendship must launch his sentiment at least,
As 'prisoned damsels locked from lover's lips
Toss them a kiss from off their finger tips:—

The morning visit; not till sickness falls
In the charmed circle of your own safe walls,

Till fever's throb, and pain's relentless rack,
Stretch you all helpless on your aching back—
Not till you play the patient in your turn
The morning visit's mystery you learn;
'Tis a small matter in your neighbor's case
To charge your fee for showing him your face,
You skip up stairs, inquire, inspect and touch,
Prescribe, take leave, and off to twenty such.
But when, at last, by Fate's transferred decree,
The visitor becomes the visitee—
O, then indeed it pulls another string,
Your ox is gored, and that's another thing.
Your friend is sick-plegmatic as a Turk,
You write your recipe and—let it work.
Not yours to stand the shiver and the frown,
(And sometimes worse) with which your draught goes down.
Calm as a clock, your knowing hand directs:—
Rhei, jalapæ—ana grana sex,
Or trace upon some tender missive's back:—
Scrupulos duos—pulveres ipacac.
And leaves your patient to his pains and gripes,
Cool as a sportsman banging at his snipes.
But, change the *time*, the *person*, and the *place*,
And be *yourself* the "interesting case,"
You'll gain some knowledge which it's well to learn,
In future practice it may serve your turn—
Leeches, for instance, pleasing creatures quite,
Try them, and bless you! don't you find they bite?
You raise a blister for the slightest cause,
But be yourself the great sublime it draws.
And trust my statement, you will not deny
The worst of draughtsmen is the Spanish fly.
It's mighty easy ordering when you please
Infusum sennæ—capiat mucias tres.
It's mighty different when you guzzle down
Your own three ounces of the liquid brown,
Pilulæ—pulveres—pleasant sounds enough,
When other jaws receive the shocking stuff;
But, oh, what flattery can disguise the groan
That meets the gulp that sends it through your own.
Be gentle, then, though Art's inspiring rules
Give you the handling of her sharpest tools,
Use them not rashly—sickness is enough,
Be always "ready—but be never "rough."
Of all the ills that suffering man endures
The largest fraction liberal Nature cures,
Of those remaining 'tis the smallest part
Yields to the efforts of judicious Art.
But simple kindness—kneeling by the bed
To shift the pillow for the sick man's head,
Give the fresh draught that cools the lips that burn,
Fan the hot brow, the weary frame to turn;
Kindness untutored by our grave M.D.'s,
But Nature's graduate, whom she schools to please,
Wins back more sufferers with her voice and smile
Than all the trumpery in the druggists' pile.
Once more—be quiet coming up the stair,
Don't be a plantigrade—a human bear,
But stealing softly on the silent toe
Reach the sick chamber, ere you're heard below
Whatever changes there may meet your eyes
Let not your looks proclaim the least surprise,
It's not your business by your face to show
All that your patient doesn't wish to know.
Nay—use your optics with considerate care,
And don't abuse your privilege to stare.
But if your eyes should probe him overmuch,
Beware still further how you rudely touch.
Don't clutch his carpus in your icy fist,
But warm your fingers ere you take the wrist.
If the poor victim needs must be percussed,
Don't make an anvil of your patient's bust.
Doctors exist, within a hundred miles,
Who thump a thorax as they'd hammer piles.
If you must listen to his doubtful chest,
Catch the essentials and ignore the rest,
Spare him—the sufferer wants of you and art
A track to steer by—not a finished chart.
So of your questions—don't, in mercy, try
To pump your patient absolutely dry.
He's not a mollusk, squirming in a dish,
You're not Agassiz—and he's not a fish.
And last, not least, in each perplexing case,
Learn the sweet magic of a cheerful face,
Not always smiling—but at least serene,
When grief and anguish cloud the anxious scene,
Each look, each movement, every word, and tone
Should tell the patient you are all his own,
Not the mere artist—purchased to attend—
But the warm, ready, self-forgetting friend,
Whose genial visit, in itself combines
The best of tonics, cordials, anodynes.
Such is the visit that from day to day
Shed's o'er my chambers its benignant ray.
I give him health who never cared to claim
Her babbling homage from the tongue of Fame,
Unmoved by praise—he stands by all confessed
The truest, noblest, wisest, kindest, best.

INCREASE IN SUICIDES IN ENGLAND.

The interest felt in Great Britain over the increase in lunacy is now supplemented by that felt in the increase of suicide. Naturally enough, the two go hand in hand. It has been held that no one in a perfectly sane state will commit suicide. That opens the old and large question of "What is it to be sane?" Most thinking men, we believe, do not attempt to draw a hard and fast line, at least so far as words and definition go, between sanity and insanity, but look upon it as a relative matter, which would go pretty near to saying that we are all insane in some particular line or lines.

The time was when the friends of a suicide could not recover insurance on his life. Now, however, the suicide clause having been elided, it has been suggested that this elision may have something to do with the increased number of persons taking their own lives, the supposition being that many a man would be willing to "face the clay" but for the fear of leaving those dependent upon him, without any proper means of support. Now that his heirs can recover his insurance, he may often feel that he would be of more service to them dead than alive, and being weary of bearing fardels, flies to that "bourne," etc. Following out this line of thought, several English insurance companies have been lately prosecuting an inquiry as to whether the known increase of self-murder has any connection with their business. The unanimous expression of

opinion from coroners all over the country is that the suicide acts without any thought of the suicide clause being left out of his policy, which goes to make him out more honest than wise. When one gets into the condition in which he has no regard for his own life, he is not likely to consider very much the welfare or happiness of others, no matter how near they may be to him by the ties of nature. It is a very good thing that those who are able to judge best of the inner workings of the suicide's mind, viz., the coroners who have to investigate each case, speak so definitely upon the point, otherwise we might be having the suicide clause again inserted into life policies, which would be, if not a great injustice, at least a great hardship to the friends of the unfortunate one.

TESTIMONIAL TO SIR JOSEPH LISTER FROM FORMER COLLEAGUES AND PUPILS AND WELL WISHERS.

To the Editor of the CANADA LANCET:

DEAR SIR,—Sir Joseph Lister having recently retired from active hospital and teaching work, the occasion has been thought appropriate for presenting him with a testimonial of the esteem in which he is held by his former colleagues and pupils, and Committees have, therefore, been formed in Glasgow, Edinburg, and London for the purpose of raising the necessary funds.

It is proposed that the testimonial shall take the form of a portrait. Subscriptions have been limited to two guineas, and it is hoped that sufficient funds will be collected to permit of some memento of the occasion being presented to each subscriber of that amount.

As there are probably many surgeons in Canada who may wish to join in the movement, but whose names and exact addresses it has been difficult to ascertain, I should be glad if you would permit me to state that subscriptions may be sent to me at 29 Weymouth Street, Portland Place W., London, England, or to one or other of the following gentlemen who have kindly consented to act as Treasurers, viz.:—Dr. James Finlayson, 4 Woodside Place, Glasgow; Professor Chiene, 26 Charlotte Square, Edinburgh; Professor William Rose, 17 Harley Street, London W., England; Dr. Malloch, 124 James St. South, Hamilton, Ont., or Mr. J. Stewart, M.B., Pictou, Nova Scotia.

I have the honour to remain, Sir,
Yours faithfully,
J. FRED. W. SILK,
Honorary Secretary.

P. S.—Two guineas are about $10.23.

THE DECLINE OF MARRIAGE.—Mr. Grant Allen has undertaken to explain why marriage is less common than it was a century ago: "Thirty or forty years ago young men used to rush by blind instinct into the toils of matrimony—because they couldn't help themselves. To-day they shilly-shally, they pick and choose, they discuss, they criticize, they say foolish things about the club and the flat and the cost of living. They believe in Malthus. Fancy a young man who believes in Malthus! But they don't marry, and it is because they are less of young men than formerly. Wild animals in confinement seldom propagate their kind. Only a few caged birds will continue their species. Whatever upsets the balance of the organism in an individual or a race, tends first of all to affect the rate of reproduction. Civilize a red man and he begins to decrease at once in numbers. Is not the same thing true of us? Civilization and its works have come too quickly upon us. The strain and stress of correlating and co-ordinating the world we live in are getting too much for us. Railways, telegraph, the latest edition, has played havoc at last with our nervous system. We are always on the stretch, rushing and tearing perpetually. We bolt our breakfast, we catch the train or 'bus by the skin of our teeth. The tape clicks perpetually in our ears the last quotation in Eries, the telephone rings us up at inconvenient moments. Something is always happening somewhere to disturb our equanimity. Life is one turmoil of excitement and bustle. Financially, 'tis a series of dissolving views; personally, 'tis a rush; socially, 'tis a mosaic of deftly fitted engagements. Drop out one piece and you can never replace it. You are full next week from Monday to Saturday—business all day, what calls itself pleasure (save the mark!) all evening. Poor old leisure is dead. We hurry and scurry and flurry eternally. One whirl of work from morning till night; then dress and dine; one whirl of excitement from night till

morning. A snap of troubled sleep, and again *da capo*. Not an hour, not a minute, we can call our own. The first generation after Stephenson and the Rocket pulled through with it somehow. They inherited the sound constitutions of the men who sat on rustic seats in the gardens of the twenties. The second generation—that's you and me—felt the strain of it more severely. New machines have come in to make life more complicated; telegrams, Bell and Edison, submarine cables, evening papers, perturbations pouring in from all sides incessantly; the suburbs growing, the hubbub increasing, metropolitan railways, trams, bicycles innumerable; but we still endured, and presented the world all the same with a third generation—ah, me! there comes the pity of it! One fancies the impulse to marry and rear a family has wholly died out of it. It seems to have died out the most in the class where the strain and stress are greatest. I don't think young men of that class to-day have the same feelings towards women of their sort as formerly. With certain classes and in certain places a primitive instinct of our race has weakened. The present crisis in the marriage market is due not to clubs or the comfort of bachelor quarters, but to cumulative effect of nervous over-excitement."

Arsenic Treatment of Cancer.—At the Medical Gesellschaft, Lassar showed, *Med. Press*, a woman whom he had successfully treated for melanotic tumor of the breast with arsenic. In his remarks he said that all were familiar with the general and rapid progress that these tumors made in spite of surgical treatment where they usually recurred. All had a wholesome dread of the systematic affection which early occurred, and that literature confirmed. Some of these neoplastic growths were slow in their increase, others more rapid, but the present case came under the former category. It appears that the steel of her corsets had pressed unduly on the mammilla, after which a nodule appeared. The treatment adopted seems to have been caustic, or blisters to the part to reduce the swelling, which evidently gave it a new impetus, for after a week we are told it assumed the size of a large pear, when energetic treatment by extirpation was proposed. Lassar commenced internal treatment with five drops of Fowler's solution three times a day after food. From the very first week after this treatment was commenced the tumor began to shrink, often succeeded with pauses, but still the size retrograded till the present year, when it has finally disappeared. The treatment has been discontinued for two months, and no recurrence is evident.

He notes one particular which is worth bearing in mind in connection with nævi which increased during the treatment with arsenic. He believes, however, that heteroplastic neoplasms of malignant character can be easily counteracted by arsenic if promptly applied at an early stage of progress.

County Medical Association.—The eleventh regular meeting of the County of Simcoe Medical Association was held in the council chamber, Collingwood, on Thursday evening, Sept. 27, the newly elected president, Dr. Howland, of Huntsville, in the chair. The following members were present: Drs. Aikman, Ardagh, Arthurs, Aylsworth, Ball, Bird, Decker, Donaldson, Hanly, Hunt Large, Lehmann, McGee, McGaul, McLeod, McClinton, McKay, Morton, Resbitt, Pauling, Peters, Raikes, Ross, Smith, Starr, Stephen, and West. The meeting was opened with a paper by Dr. Hunt, of New Lowel, on the diagnosis and treatment of scarlet fever, which was very fully discussed by Drs. Hanly and Stephen. Dr. McKay, of Collingwood, presented a patient with an abdominal tumor, giving a full and exhaustive history of the case. Dr. A. E. Ardagh, of Orillia, read a paper on meningitis in children, which was discussed by Drs. Morton, Stephen and Shaw. Dr. Starr, of Toronto, the Secretary of the Dominion Medical Association, was present as the guest of the Society, and read a paper, illustrated by numerous photographs, on inflammation of the frontal sinus. In the absence of Dr. Paul Gillispie, Dr. McGee, of Midland, read his paper on the treatment of pneumonia, which was discussed at considerable length by Drs. McFaul, Stephen, Raikes, and Starr. After an address by Dr. Hanly, of Waubaushene, in support of his candidature for a seat in the Medical Council, the meeting adjourned.

Strophanthus in Dipsomania.—It would seem,

to judge by some of Dr. Skvottzow's, *Sem. Med.*, observations, that tincture of strophanthus may arrest an attack of dipsomania very quickly. This curious effect of the medicament in question was discovered accidentally by the author in a corpulent man of 63 years, who drank large quantities of brandy. As he exhibited feebleness and intermittence of pulse, the author considered it necessary, to relieve the embarrassed cardiac action, to prescribe a dose of seven drops of tincture of strophanthus three times a day. The patient was seized, after the first dose, with nausea, and experienced such a disgust for alcohol that he abandoned its use abruptly and definitely. The same effect is reported by the author in two other instances. Strophanthus always provoked a nauseated condition, soon followed by abundant perspiration—an effect not ordinarily observed in non-alcoholic persons. The abrupt suppression of alcohol is said not to have produced any delirium, which is contrary to the usual experience with drunkards.

THE EFFECT OF ETHER AND CHLOROFORM ON THE KIDNEYS.—Wunderlich (*Annals of Surgery*), after the examination of the urine in 125 cases, before and after anæsthesia, draws the following conclusions as to the effect of ether and chloroform narcosis on the kidneys: 1. An already existing albuminuria is often increased by etherization. No such case in which chloroform was given was observed. 2. Albuminuria can be caused by narcotization with chloroform and ether, more often with chloroform, the relative frequency with which it occurs after the use of chloroform and ether being 11.5 to 6.9. 3. As a result of the use of chloroform, casts may appear in the urine. This is less frequent after the use of ether. The relative of frequency is 34.8 to 24.6. 4. When casts are already present, both anæsthetics have the effect of increasing the number.

BLOODLESS OPERATION FOR HÆMORRHOIDS.—Manley, *Boston Med. and Surg. Jour.*, describes his bloodless method of treating hæmorrhoids. A brisk purgative is given the evening before the operation. Before operating, two to four ounces of whisky are administered and effective cocainization applied hypodermically. Anal dilatation, gradual and steady, without rupture of the muscle is done, and after drying and mopping with cocaine solution, each hæmorrhoid is separately seized, close to its base, firmly between the tip of the thumb, index and middle fingers. It is put on full stretch, then twisted, and finally so completely crushed that it is reduced to a pulp, and none of the investing tunics remain, except in the mucous membrane and its under stratum of fibrous tissue. The mass is then returned and an opium suppository introduced. He has treated thirty-two cases in this way with perfectly satisfactory results.

OBITUARY.—The sad news has been cabled from London, Eng, of the death of Dr. Hugel Guelph on Oct. 24th, one of our recent graduates, and a man giving promise of much future usefulness. He had just commenced a post-graduate course at the College of Physicians and Surgeons, London, and was looking forward to a speedy return to Toronto, where he had lived with his aunt, Miss Kent, in Gerrard Street. His death was caused by meningitis. Much sympathy will be expressed by all who knew Dr. Guelph for his bereaved relatives.

THE death of Professor Hermann Ludwig Helmholtz leaves another great blank on the roll of living scientists whose names are household words wherever science is known. The Professor was born in 1821 at Potsdam, and died on the 8th ult.

FOR ACNE AND COMEDONES.—Dr. Spaulding, says, *Med. World*: I have found by actual treatment in numerous instances of acne or comedones that an ointment of red iodide of mercury and vaseline, made up in the proportion of two to ten grains to the ounce, has been a sure cure in all cases where used with perseverance in the following manner:—First wash the face thoroughly with some non-astringent soap and warm water; after drying the flesh, apply by thorough rubbing, to all diseased places, the ointment once a day. This treatment should be kept up for at least a month, or until every remnant of the disease has disappeared. The ointment should be made very mild for delicate, thin skin, but hard, thick, dry flesh will often require the full strength of ten grains to the ounce. If made too strong it will blister the surface.

THE ROCKING CHAIR. — An English surgeon says that people who use rocking chairs most, get deaf soonest. Rocking also hurts the eyes and makes people near-sighted, *Med. Compend.*

Rocking chairs are also a very common cause or one of the factors in producing pelvic diseases. The contraction, pressure and relaxation produced by several hours' constant rocking produces a hyperæmic condition of the pelvic organs. At first the vaso-motors soon exert themselves and the vessels return to their normal condition, but when this is kept up for years the vaso-motor control becomes less and less till congestion takes place, and the long list of pelvic symptoms follows. A straight chair and hot water injections have cured a large number of gynæcological cases in our hands.

WANT NO PHYSIOLOGY.—The Christian Scientists of Burlington, *Times and Reg.*, Iowa, have petitioned the school board to excuse their children from attendance when physiology is taught. The petition declares that there is no material body, and objects to having their children taught to believe there is anything so much in evidence as a stomach or a liver. It objects also to geography, on the score that it recognizes a material body. The petition was refused, as the school board was too painfully conscious of its own stomach, liver, and other of the fabulous imaginary organs of the myth and delusion called the human body, to be able to coincide with the views of the petitioners.

RECEIVED sample of Bromidia some time ago. Since receiving same we have given it a fair test with the result that we keep it constantly on hand as a reliable sedative in all cases of insomnia and delirium arising from the abuse of alcohol or other stimulants. THE KEELEY INSTITUTE, Marysville, O., Jan. 20th, 1892.

WE are indebted to Dr. N. A. Powell, of this city, for the poem by the late Dr. Holmes, which appears in another column, as well as for his very interesting obituary notice. The poem appears in only one, and that a very rare edition, of Dr. Holmes' works.

NOT HEALTHY.—Mr. Hugging: What do you think of the latest medical dictum that kissing is unhealthy? Mr. Hunker: It is quite true. Mr. Munn happened to catch me kissing his daughter, and I was laid up a whole week.—*N. Y. Sun.*

ON the ground of a statistical study, Mr. Barling (*Brit. Med. Jour.*) states that the supra-pubic operation is by all odds the most dangerous.

AT the Antwerp World's Fair Exposition, Wm. R. Warner & Co., were awarded the Grand Prize for the purity and excellency of their preparations.

INCONTINENCE OF URINE.—Dr. White, *La Revue Médicale*, recommends the following formula in incontinence of urine in children:

℞—Benzoate soda, Salicylate soda,	āā . (grs. xv.)	1.0
Ext. belladonna, . . .	(grs. xxx.)	2.0
Cinnamon water, . .	(℥ iv.)	120.0

A teaspoonful four or five times a day.

Books and Pamphlets.

OPERATIVE SURGERY. By T. L. Kocher, M.D., Professor at the University, and Director at the Surgical Clinic at the Berne University; with 163 illustrations. New York: William Wood & Co. 1894.

The object of this work is very well outlined by the author in the following paragraph selected from the introduction: "The most important task of a surgical text book applicable to the living subject, appears to be that the reader be enabled to post himself rapidly and surely regarding the path the knife has to follow in incisions in any part of the body, and to any depth desired."

This object has been consistently kept in view throughout the book, and the result is a work of undoubted value to the busy practitioner. Without discussing indications for operation, the author has pointed out the preferable lines for incision, and the dangers to be avoided. The many excellent wood-cuts are a decided aid to the student. His articles on anæsthesia, the treatment of wounds, and the selection of the direction of incisions, embody the results of prolonged and careful observation, and ripe experience. The anatomical nomenclature differs in some instances from that to which we have been accustomed. This is however, a very trifling detail, and the reader soon learns to admire and appreciate the remarkable clearness with which the whole subject is presented.

THE CANADA LANCET,

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

Original Communications.

PACHYMENINGITIS HÆMORRHAGICA INTERNA.*

BY J. T. FOTHERINGHAM, M.D., C.M., TORONTO.

I have much pleasure in showing the dura mater and subdural false membrane with clot, from a case of this somewhat rare disease. Clinical notes of the case are as follows:

R. H., æt. 59; tailor; married; born in Yorkshire, Eng. Has always been in fair health till for past few months (a rather indefinite time), has suffered from constant and well distributed vertical headache. For many years had used alcohol, and for last six years to great excess, his wife telling me that every other night he would be wildly drunk, so that they had to lock him up in the house, and that every day he was "soaking." He had not the appearance of a drinker, but was of spare thin frame, medium height, nervous temperament, and a good specimen of the thin apoplectic. His wife volunteered the statement that she had noticed distinct change of character and temper for the past two years, irritability and "nervousness" being marked.

I saw him first at my house on Sept. 9, '94, and for the headache gave bromide and a laxative pill, from which later, he reported no benefit. On Sept. 11, I was sent for to his house, as he was said to have had a "stroke." I found that about an hour before, about 8 p.m., on his way home from the shop, he had fallen in the street, and that there was a transient crossed paralysis, without nausea or convulsions, affecting sensation and motion of left side of face, and of right arm. The legs had recovered, if affected at all. He said that they had given way under him; but they were normal in both sensation and motion when I saw him. The tongue was protruded slightly to left side, and the disturbance of speech was not aphasic, but motorial, the tongue and lips being slightly paralyzed. Temperature about 98° F.; pulse about 80 and regular. Arteries (radial) stiffened, but not calcareous, and tension not apparently very high. Apex beat of heart in nipple line, but not much lowered; possibly some slight hypertrophy. No murmur, and sounds rather weak; second sound accentuated relatively, but not, I think, absolutely. I diagnosed it to be a case of hæmorrhage low down in the pons, so as to be below the decussation, but high enough to include the facial fibres on their way out. Urinary system apparently normal, as on the eighth day there was no trace of albumen.

Gave ergot and the bromides, but did not apply ice to the head. Coma gradually deepened, though at first he would rouse of his own accord when anyone entered the room, and was always rational, only apparently sleepy. Ate and drank fairly well. Power of speech gradually failed, and tongue grew dry, brown, and very foul. Temperature rose on 7th day a little, 8th day 101⅕° F., 9th day 101⅘° F. (axilla), and 11th day 104° F. (axilla), eight hours before death. Pulse slowly quickened, till 9th day it was at 120, and 11th day 160 or so. Respiration also began to fail about 8th day, rising to 30 on that day, 50 on the 9th day, with opening of nares and sinking of apices and base of thorax on inspiration. It was not slowed at any time. Cyanosis was marked in face, veins of extremities full, capillary circulation feeble. No evidence of pneumonia, but possibly some slight hypostatic congestion; no fine crepitation. No heart murmur. Pupils were at first mobile, moderately distended, reacting well to light; later on became small and fixed. Remained equal throughout. Urine and fæces were voided in bed for last four or five days. Fibrillar tremors of tongue and twitching of eyeballs were seen for last two days, but death occurred very easily, apparently from respiratory failure, on the 11th day. The skin was sometimes very wet with perspiration, even while the temperature was high.

Post-mortem.—Done by Dr. L. M. Sweetnam and myself, about 24 hours after death. Only the cranium opened.

* Read before the Pathological Society of Toronto, Oct. 27, 1894.

1. *Membranes.*—a. *Dura mater*, very adherent and much thickened. Outer surface white, but studded with many bleeding points. Calvarium also studded with similar points, and near posterior end of sagittal suture an area about 1¼ inch long and ¾ inch wide, where the dura mater seemed to have ossified a little and left little osteophytes sticking to the bone. The calvarium was, if anything, slightly thinner than usual. Over both parietal regions was a well-marked false membrane, simulating the arachnoid, but showing at its line of junction with the dura well-marked sacculation, and separated from it by effusion and bloody clot, so that it seemed at first as if the dura were about ⅛th inch thick in places, and full of tawny brown serum and clot. There was a thin clot, about ⅛th inch thick, on each side in frontal region, and these thinned off to mere reddish inflammatory infiltration.

b. *Pia mater*, apparently normal, but for blood-staining, which was not all *post-mortem*.

2. *Cerebrum.*—Convolutions in parietal and frontal regions slightly flattened; whole organ small. No evidence of arterial disease, even vessels entering anterior perforated space seemed normal. White matter slightly congested and pink in color. Very little cerebro-spinal fluid in ventricles, and that sanguineous.

3. *Cerebellum.*—Normal.

4. *Pons and medulla.*—Some areas of pink, but no extravasation. One or two small vessels seemed to ooze too freely on cut surface, as if engorged.

Post-mortem diagnosis.—Pachymeningitis hæmorrhagica interna, not acute but chronic; death due to exacerbation, with at least two effusions large enough to form clots.

Looking up the history of this disease, we find Fagge referring to Virchow, who was the first to elucidate its pathology and gave it the name by which it still goes. Fagge prefers the name *hæmatoma of the dura mater*, but that would seem undesirable, as conveying no distinction between this disease and the condition usually traumatic, in which blood is effused between the dura mater and the bone; a condition different in almost every respect, both as to its anatomy, its etiology, its prognosis and its treatment. Osler remarks the rarity of the disorder and says that "Virchow's view that the delicate vascular membrane precedes the hæmorrhage is undoubtedly correct." He says, too, that extensive bilateral disease may exist without a single symptom; but this, I think, must occur only in cases of paresis, when subjective symptoms are not apt to be complained of. The three causes given by Fagge and all the other authorities I have been able to see are: *a*, senile decay; *b*, chronic alcoholism; *c*, general paralysis of the insane; and Fagge intimates that he holds the disease to be merely a complication of cerebral atrophy in one of the three above-mentioned conditions. It does not seem to have been so in my case, as there was no evidence of insanity, or even incompetence for business. Idiots and epileptics are said sometimes to have advanced forms of the disease.

Opposed to Virchow's theory, but now no longer held, is that of Huguenin, who held that the initial lesion was a soft layer of blood-clot spread out over the convolutions, and slowly organized to a sort of membrane which was separated from the dura mater by subsequent hæmorrhages or effusions. But this cannot very well have been the case, as one would expect the pia mater to be adherent to one side of the clot and the dura to the other, which seems never to occur.

Delafield and Prudden put the present view of its pathology very well, as follows: "This form of chronic inflammation of the dura mater is characterized by the formation of layers of new delicate connective tissue, with numerous very thin-walled blood-vessels, from which the blood is prone to escape. The membrane may at first appear as a delicate fibrinous pellicle, with small red spots scattered through it; or it may look like a simple reddish or brown staining of the inner surface of the dura mater. Microscopical examination shows this membrane to consist of numerous blood-vessels, mostly capillaries with very thin walls, which may be distended or pouched, and which have grown out from the vessels of the dura mater. Between the vessels is a homogeneous or slightly differentiated basement-substance, containing a varying number of fusiform, branching or spheroidal cells. Red blood cells in varying quantity, and blood pigment in various forms, frequently enclosed in the new cells, and small calcareous concretions

(brain sand) also lie in the intervascular spaces. In more advanced stages the new membrane may become greatly thickened, its outermost layers (i.e., next cerebrum) being changed into dense fibrous tissue with obliteration of the vessels, while the more recently formed layers are similar in structure to those at first developed. Considerable blood usually escapes from the vessels of the new membrane by diapedesis in all stages of its formation, and the vessels also are very liable to rupture, giving rise to extensive hæmorrhages either into the substance of the membrane or between it and the pia mater. Sometimes layers of new tissue and blood, from half an inch to an inch or more in thickness, are in this way formed, greatly compressing the brain."

Ziegler expresses practically the same views, but in less detail. Church, of Chicago, in Starr's *American Handbook of the Diseases of Children*, says that this disorder is practically unknown in childhood, as affecting the spinal dura, and I cannot find cerebral pachymeningitis mentioned in the work. It does occur sometimes in rhachitic children, and, as already stated, in idiots, though not usually at a very early age.

PROFUSE MENSTRUATION.

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We shall consider in this paper that profuse menstruation is synonymous with menorrhagia, or too great loss of blood at the menstrual period. Our subject will then embrace all those conditions which can give rise to this symptom. The terms profuse menstruation and menorrhagia are of practical value and have come down to us from the older gynæcology, which was almost purely clinical and dealt but little with the pathological conditions at the basis of symptoms.

The causes of menorrhagia are numerous. They are best grouped as constitutional, general and local.

Among the constitutional causes we have the hæmorrhagic diathesis and scurvy. Among the general causes cardiac and hepatic diseases are the most important. Whatever will bring about a lack of tone in the general circulation will predispose to pelvic congestion and menorrhagia. Incompetency of the cardiac valves and cirrhosis of the liver are the most frequent of the general causes of menorrhagia. Chronic Bright's disease is also a cause of menorrhagia; but in such cases it is questionable whether it is the kidney disease itself or the associated morbid condition of the blood vessels and of the heart, which is the real cause of the profuse menstruation.

The local causes of menorrhagia are: Pelvic congestion, endometritis, metritis, adenoma, polypus, fibroid tumors, carcinoma, or sarcoma, retained products of conception, hæmatocele, certain diseases of the uterine appendages, especially cystic degeneration of the ovaries.

A glance at this long list of causes of menorrhagia makes it apparent that it will be impossible in a brief paper to more than glance at the nature of these conditions, and to summarize our knowledge of their treatment.

It is worthy of comment that the common causes of menorrhagia vary with the period of life to which the patients belong. In young virgins shortly after the onset of puberty, menorrhagia at times occurs. Under these circumstances it is due to the fact that the menstrual function has not been perfectly established. There is lack of control on the part of the nervous system, both of the menstrual function itself and of the vasomotor nerves in general. In the cases which have come under my observation this has appeared to be the cause of the profuse menstruation. These girls were plainly "growing too rapidly," they were "shooting up," and had the lax tissues characteristic of such individuals.

Menorrhagia in young child-bearing women is due usually to some mishap in connection with pregnancy and parturition. An incomplete abortion, a sub-involuted uterus, laceration of the cervix, and retroversion of the uterus are the most frequent causes of menorrhagia in women of this class. Inflammatory disease of the uterine appendages is also frequently present in women at this period of their lives, and menorrhagia due to this cause, with co-incident endometritis, is quite common.

Menorrhagia occurring in women approaching the forties, and in those who are older, is of very suspicious import. In younger women, as a rule, it is a symptom of some curable condition, and is

of importance only because of its severity—the loss of blood producing anæmia, and breaking down the patient's health. In older women it has a very different signification. It is almost always due to gross disease of the uterus. These women, as a class, have passed the period of child-bearing, and their sexual organs are being prepared for the retrograde changes which take place at the menopause. As we know, it is a law that tissues, especially glandular tissues, which are undergoing atrophic changes, are most apt to develop malignant growths. The uterus is no exception to this rule, and cancer is extremely common among the class of women under consideration.

The ancient tradition that it is natural and proper for a woman to bleed profusely and irregularly when she approaches the period of the menopause, is the indirect cause of many preventable deaths from cancer of the uterus. This traditional belief is generally accepted by women themselves, and unfortunately is advocated by many physicians who have not given the subject of diseases of women much study. This teaching they received as students, and, although it has long been shown to be false, they have never abandoned it. It is natural that women should hold to this opinion, because it was quite current in the profession a generation or two ago. Popular beliefs are usually a fair reflex of what was the professional teaching of fifty or seventy-five years before. Believing it to be natural at their time of life, women disregard a menorrhagia when they are forty or fifty which would cause them much uneasiness if they were twenty-five or thirty. The same is true of a leucorrhea. In this way, but too often, carcinoma is permitted to develop to the stage of ulceration and to that of secondary deposit, before the surgeon is consulted. Perhaps a physician is consulted at an earlier period who is a believer in the doctrine of climacteric hæmorrhages, and who soothes the patient with the assurance that there is no occasion for alarm, as "it will all come right at the change of life"; and so the poor victim rests in fancied security, until she has a rude awakening a little later, and discovers that death is inevitable owing to the inroads which the disease has already made. My own experience is so distressing with reference to the management of cases of cancer, that I feel very strongly upon this subject. About one-tenth of all the cases which come under my observation are the victims of cancer, and of these not more than one in ten have consulted me sufficiently early to enable me to offer any reasonable ground of hope of being able to affect a cure by a radical operation.

While it is true that cancer is a very common, if not the most usual, cause of menorrhagia, in women approaching the menopause, it is by no means the only one. Endometritis, adenoma and fibroid tumors are also frequent causes at this period of life. It is a striking fact that whereas, in young virgins, the causes of menorrhagia usually have to do with the nervous system, and that in young child-bearing women menorrhagia is usually due to some mishap connected with pregnancy, that in older women it is almost always due to gross disease of the uterus.

Treatment.—As loss of tone of the vascular system predisposes to menorrhagia, it follows that by building up the general health and improving the tone of the circulation much can be accomplished in any case of menorrhagia. Digitalis, strychnine and ergot act directly upon the muscular structure of the heart and arteries and lessen pelvic congestion, and can sometimes be depended upon to lessen hæmorrhage from the uterus, provided the local morbid conditions are not of a very marked character.

The local treatment of menorrhagia depends, of course, upon the nature of its cause, so that the most important point is first to make a diagnosis. One of the drawbacks to the older nomenclature, to which our present title belongs, is that it does not tend to favor accurate diagnosis. There is no treatment for menorrhagia, *per se*, and that fact should be distinctly emphasized. Many a woman has gone to her death from unrecognized cancer, or cancer recognized too late for its eradication by operation, because the attending physician was satisfied with the diagnosis of menorrhagia, and addressed his treatment to that entity. Every case of menorrhagia deserves careful study, and this is especially true when it occurs in women who are upwards of thirty years of age. A careful inquiry into the case will usually put the astute physician upon the right track. In a case of short duration, in which the amount of blood lost is inconsiderable, especially if there be no complaint of pelvic pain and no breaking down of

the general health, it may be permissible to treat it upon general principles; that is, to regulate the bowels, the habits of the individual, to treat any symptoms which may be present, to prescribe regular habits of living, and to administer digitalis, strychnine and ergot. Especially is this the case if the patient be unmarried and if the discharges are free from offensive odor. The physician would be the more inclined to make use of general treatment only if in such a case the heart was found to be incompetent, or the liver congested. But he should not permit himself to continue the treatment without an accurate diagnosis unless the patient promptly and steadily improves.

Accurate diagnosis is the keynote to success in the management of cases in which menorrhagia is a symptom. That this is a truism makes it none the less important that it be followed out faithfully in the management of each individual case. With the exceptions already referred to, and young girls, it should be the maxim of the practitioner that every woman having menorrhagia should have a careful pelvic examination. A careful examination should be made to determine whether or not pelvic congestion is present; the size, shape, consistency and position of the uterus; whether or not it be inflamed; whether it contains a tumor or the products of conception. Also the condition of the uterine appendages should be investigated. Whether or not these are healthy, and if not, the morbid condition present; whether this be a tumor, inflammatory trouble, or a hæmatocele. The condition of the general circulation, the heart and the liver, should also be investigated, and in no case should an examination be considered complete until all of these conditions have been considered.

It may prove of interest if I give succinctly my own views concerning the management of the various conditions which give rise to menorrhagia.

Pelvic congestion, when not due to or accompanied by structural disease in the pelvis, and when not the result of a recent parturition, is best treated by medicines addressed to the general health—by tonics, by heart stimulants, and by proper hygienic measures, including active out-of-door exercise. Pelvic congestion alone is seldom the cause of menorrhagia, except after parturition, but it predisposes to endometritis, and in this way indirectly becomes a cause.

Endometritis and *metritis* when not complicated by inflammatory disease of the uterine appendages are treated most satisfactorily by dilatation of the cervix, and a careful and thorough use of the sharp uterine curette and cutting curette forceps. In this way more can be done in ten minutes than can be done in ten weeks in any other way. In my hands, in the class of cases referred to, the results obtained have been very satisfactory, and the failures to cure and the recurrences have been exceptional. While stating this in general terms it is admitted, of course, that the final stages of areolar hyperplasia are not specially influenced by the use of the curette, or by any other form of treatment except the ablation of the uterus.

Adenoma is likewise best treated by the use of the sharp curette.

Malignant adenoma calls for pan-hysterectomy.

Polypi should be removed *per vaginam*, and the endometrium thoroughly curetted.

Fibroid tumors which are giving rise to menorrhagia should be removed *per vaginam* when they belong to the sub-mucous variety, and can be removed from below, otherwise they should be removed by hysterectomy.

Carcinoma and *sarcoma* of the uterus call for pan-hysterectomy whenever the disease remains localized in the uterus; otherwise a partial operation, having for its object the removal of necrotic tissue, or the prevention of hæmorrhage or foul smelling discharge, may or may not be advisable in individual cases. When the disease has involved the pelvic glands to any considerable extent, and when pain has become a marked feature in the case, I have seldom found much benefit from operation. It may prevent or control the foul smelling discharges, but it seldom modifies the pain unless this has been of an inflammatory character due to septic absorption from the necrotic surface of the cancer. Every case, however, should be judged upon its merits, and as the result in all cases which are far advanced is an inevitable, and more or less painful and disgusting death, it can at least be said that operation can hardly make matters worse, even though it fails to afford much relief.

The treatment of *retained products of conception* is their removal.

Hæmatocele is due almost always to a ruptured extra-uterine pregnancy, and should be treated by

celiotomy, removal of the pregnant tube and of the effused blood.

When endometritis and menorrhagia are produced by inflammatory disease in the uterine appendages, or by ovarian tumors, the conditions are such, as a rule, to call for celiotomy and the removal of the diseased appendage or appendages.

Cystic degeneration of the ovaries is at times a cause of menorrhagia and metrorrhagia. A number of such cases have come under my care. In these cases the ovaries were not markedly enlarged, and upon bi-manual examination it was only possible to say that the ovaries were rather large and tender. In these cases, curettement, the rest cure, and all manner of internal medication was tried without avail, as the hæmorrhages recurred very promptly, and the patients were not cured until the ovaries were removed. In each of the cases cure promptly resulted.

I have as yet said nothing about the use of electricity in the treatment of menorrhagia. The advocates of electricity claim that this is perhaps the field in which it is of the greatest value, and I am inclined to believe that for simple cases of endometritis or metritis, that it is capable of effecting a cure. But the method of treatment is tedious and painful, and when sufficiently strong currents are employed to assure the effect upon the uterus, the method is not without danger. As compared with the curette, I believe it is more dangerous, less certain, more painful, and much less satisfactory.

My own experience with the use of drugs in the treatment of menorrhagia has not been large. Digitalis, strychnine, and ergot, have proved themselves in my hands to be of real value, and except in those cases in which the local conditions have been so bad as to make it irrational to except much effect from constitutional remedies, the results from the use of these agents have been satisfactory. My experience with other drugs has been small. Hydrastis Canadensis has been used to some extent, and I have never been able to satisfy myself that it has the slightest action in the way of controlling uterine hæmorrhages.

There are two other forms of treatment of value, especially in bridging over an emergency in the treatment of cases of menorrhagia. These methods are systematic rest in bed, and the use of the vaginal tampon. With the exception of those cases in which menorrhagia is due to malignant disease to adenoma, or to the retention of the products of conception, rest in bed has a very positive influence in lessening the amount of blood lost. It is of practical value, chiefly in the management of cases which are seen late, after so much blood has been lost that the patients are suffering from acute anæmia and profound prostration, so much so that it might not be safe to anæsthetize them in order to institute any radical method of treatment. This reference applies especially to cases of fibroid tumor. I have again and again in such cases' when consulted under the circumstances referred to, been able to greatly improve the condition of the patients by putting them to bed, keeping their bowels regular, and, perhaps, administering strychnine, digitalis and ergotine. I have in this way been enabled, a number of times, to do hysterectomy with success, when I am satisfied had the operation been performed when the patient first came under observation, the result would have been fatal.

In certain cases the use of the vaginal tampon is of great service in temporarily arresting hæmorrhage. In the class of cases just referred to, when the bleeding is aggravated by the onset of the menstrual period, by firmly tamponading the vagina during the days when hæmorrhage otherwise would be most free, it is quite possible to limit the loss of blood to a very small quantity. This has been advocated as a systematic means of managing certain intractable cases of menorrhagia, and I can add my testimony to its value, at least as a temporary expedient, in the management of certain cases of uterine hæmorrhage.

The ligation of the uterine arteries offers another means of controlling hæmorrhage from the uterus, no matter what the immediate cause of the hæmorrhage may be. As a preliminary operation, in dealing with a small class of fibroid tumors, in which a large amount of blood has been lost, and in which acute anæmia is present, this operation offers much. Likewise in certain cases of persistent hæmorrhage after the removal of the uterine appendages, in combination with thorough curettement of the uterus, I believe that this procedure will be of great value.

Certain cases of persistent and recurrent hæmorrhage have come under my observation, which have resisted all the usual methods of treatment.

In such cases the cause is usually malignant adenoma. When the microscope clearly shows this to be the case, or when the trouble recurs time and again after thorough curettement of the uterus, even though the microscope does not demonstrate the presence of malignancy, hysterectomy is indicated. In such cases it is a life-saving measure to prevent death from hæmorrhage. In cases where the microscope does not show malignancy, it would be proper to make use of electricity after the failure of curettement, before resorting to hysterectomy. In one case, in which curettement repeated three times failed to cure, and in which the removal of the somewhat diseased uterine appendages (cystic ovaries, catarrhal salpingitis) likewise failed to cure, this result was accomplished by packing the uterus with gauze squeezed out of fifty per cent. chloride of zinc solution, which brought away a slough of the endometrium and a part of the underlying muscularis. This very radical and somewhat hazardous method of treatment I should recommend only in exceptional cases, and not in any case in which the appendages have not been previously removed.

I have as yet made no mention of the treatment of menorrhagia by the application of carbolic acid, iodine, perchloride of iron, nitric acid, or other caustics, to the endometrium, either by means of a cotton-wrapped applicator or a uterine syringe. The reason for this omission is, that I believe these methods to be either inefficient or dangerous, or both. The milder escharotics are inefficient; the more powerful are dangerous, in that their action cannot be controlled within conservative limits. The experience of the generation preceding us has so well demonstrated the dangers attendant upon this form of treatment, that it is unnecessary for us to go over the same ground.

Conclusions.—1. Menorrhœgia in young virgins is usually functional, due to disturbances in the vasomotor nervous system or to relaxation of the tissues, in general caused by the rapid growth which at times takes place about the time of puberty. Because of its pathology menorrhagia in young virgins is usually curable by general treatment.

2. Menorrhagia occurring in young child-bearing women is usually due to some mishap in connection with pregnancy or parturition, such as the retention of products of conception, laceration of the cervix or perineum, retro-displacement of the uterus, sub-involution, inflammation of the uterine appendages, and pelvic congestion. Menorrhagia in this class of women is curable. It usually requires local treatment of an operative nature. When due to sub-involution and malpositions of the womb, operation is unnecessary.

3. Menorrhagia in women approaching the forties, and in those who are older, is usually due to gross diseases of the uterus, such as fibroid tumors, polypi, adenoma, or malignant tumors. Menorrhagia occurring in this class of women, except when due to advanced malignant disease, is curable, but almost invariably requires operative treatment applicable to the disease present in the particular case.

4. As menorrhagia is a symptom and not a disease, an exact diagnosis is requisite in every case. With the exception of young virgins it is desirable that a physical examination of the pelvic organs be promptly made. The importance of this examination is the greater with the increasing age of the patient. Special considerations should influence the practitioner to postpone the local examination in the unmarried, unless it be reasonably certain from the symptoms that gross local disease is present.

5. There is no treatment for menorrhagia *per se*. By general measures, such as rest in bed and the use of digitalis, strychnine and ergotine, pelvic congestion can be lessened, and in that way menorrhagia can be, at least in part, controlled; but it cannot be too strongly insisted upon that in every case of menorrhagia an exact diagnosis must be made, and the appropriate treatment addressed to the disease which is present.

Dr. A. Cantalupi, writing from Naples, Italy, under date of July 24th, 1893, says: Bromidia has produced successful results in all the most varied forms of insomnia. Among others who have been benefited by its use is Prof. Cesare Olivieri, well known as a most distinguished surgeon in this city, and who, aftar undergoing tracheotomy for neoplasm in the larynx, suffered terribly from insomnia, which the usual hynotics all failed to relieve. Hearing of this from a mutual friend, I advised the use of Bromidia, which promptly produced the desired result.

Selected Articles.

THE COLD POULTICE AS AN ANTIPYRETIC IN HIGH GRADES OF FEVER.

I desire to call attention to this simple, but efficient, agent as an antipyretic in high grades of fever, either typhoid, malarial, or pneumonia. It is an agent that I have used for this purpose for the past fifteen years, with much satisfaction to myself and infinite comfort to my patients. It is an antipyretic that possesses many advantages over the many coal tar agents of this kind, inasmuch as it never depresses the action of the heart or the nervous system, but accomplishes its work speedily, easily, pleasantly, and with comfort to the patient, and always leaving him in a better condition than it found him.

The cold poultice: how it is prepared and applied—A sufficient quantity of flax seed meal to prepare a poultice of suitable dimensions is placed in a common earthen bowl, and over this is poured boiling water, while the meal is constantly stirred with a large spoon until cooked to the consistency of soft mush. This material is then spread on a piece of soft cotton cloth, for an adult, about eighteen inches long and twelve or fourteen wide, or sufficiently long to cover the entire abdomen, from the pubis upward, extending at least half way up the chest, well over the cardiac region, so as to fully cover the heart and half of the chest. This poultice is now covered with another piece of cotton of corresponding dimensions. After being spread and covered, the entire surface to be applied to the person is frequently besprinkled with ice water until its temperature goes down to 68° or 70°, when it is ready for application. At this point, I would suggest that the poultice be not spread too thick, as in that case it would prove oppressive to the patient.

The poultice as thus prepared is applied over the chest, from above the cardiac region to the pubis. In my experience with it, which dates back fifteen years, I have never known it produce shock to the nervous system or discomfort to the patient. On the contrary, patients with high fever, who have learned its advantages, will often request it when they feel sensations of rise of temperature. Its work, different from that of the cold bath, is accomplished slowly, gradually, gently, and effectually. I regard the cold poultice, applied in this way, as a good substitute for the cold bath, and as a measure, while efficient, without its many disadvantages, dangers, and difficulties of application.

In the *treatment of acute disease*, high temperature constitutes one of the greatest difficulties in the practice of our profession, and is a question of vital importance. Of late years, our principal means for the reduction of high temperature have been the cold bath, cold sponging, the coal tar antipyretics, as antipyrine, antifebrine, phenacetine, salol, quinine. These are all valuable remedies, and occupy an important place in our medical armamentarium.

Of all these agents, the quinine is the most permanent in its effects. But the practitioner frequently meets with cases of fever of dangerously high temperature in which even large doses of quinine accomplish but little, and antifebrine or phenacetine in full doses will reduce temperature only one or two degrees, with an enormously exhausting perspiration and unpleasant cardiac depression; and then the reduction of temperature is only for a short time, and our work has to be gone over again and again, with the same unpleasant results. If this routine is to be continued from day to day, from week to week, there comes a time when the remaining strength and physical powers of our patient will become exhausted. In truth, under such circumstances, we will note, if we are careful, that the waning strength of the patient is leaving him day by day.

It is under just such circumstances that it becomes necessary to resort to other antipyretics that will not shock the general system as the cold bath or depress the vital powers a the coal tar antipyretics. And here, under these circumstances and in this perplexing condition of affairs, is where the simple and unostentatious cold poultice supplies a most important deficiency. It has not the dramatic effect of the cold bath, and not its apparent scientific glamour, with all of its paraphernalia and systematic arrangements. It is too simple to be regarded as scientific. But, far more valuable than all of these, it is effective and innocent. It is a simple and pure antipyretic, efficient and without danger.

It is not designed to cover the entire treatment of fever, but to aid other methods in the treatment of that condition, and to take the place of some and to aid others in their work. It cooperates well with the sulphate of quinine; it takes the place very well of the coal tar preparations, and it does not interfere with the internal administration of antiseptics.

In that class of cases of pneumonia of violent type, with an unyielding temperature of 104° or 105°, frequent, hard, wiry pulse, great frequency and oppression of respiration, I have seen a cold poultice applied over the entire chest, extending back well over the sides, accomplish more in the reduction of temperature, of frequency of cardiac action and respiration than all other local agents combined, and at the same time with infinite comfort to the patient. In the application of the poultice, my rule has been to remove it when the temperature falls to or about the normal, and to replace it when it

begins to rise; or, on the contrary, when the temperature is not reduced to the normal, to continue the poultice until the reduction takes place by the renewal of fresh applications.

For the purpose of illustrating more clearly the action of this remedy as an antipyretic, I will here cite the history of one or two cases:

Case I.—Mrs. P., a robust and fleshy young married woman, with two children, in the month of September, eighteen years ago, was attacked with typhoid fever of a very violent grade. At a very early period of her case the symptoms were of an alarming character.

On the tenth day of the attack, the pulse was 130; the temperature 105½°; almost constant delirium; tympanitis; diarrhœa; dry tongue This case occurred before the introduction of the modern coal tar antipyretics, consequently I had to depend on the use of quinine and cool sponging. My remedies failed utterly to reduce the temperature a single degree, and it finally reached 106°. My case had now reached a point when death must ensue if relief failed to come. I will note the fact here also that she suffered from constant insomnia, restlessness, and jactitation. This description presents a picture of a case with about as little to base a hope on as we usually meet. In this condition of affairs, the cold poultice suggested itself to my judgment as holding some hope of good results. The entire chest and abdomen were covered promptly with one, and never did a remedy act more gratefully. In fifteen hours the temperature was down to 101½°; the pulse 110; the patient was in a pleasant sleep and perspired freely, and the mind comparatively clear. The poultice, when the temperature reached to near the normal point, was removed, and re-applied when it began to rise. With the aid of quinine, some intestinal antiseptics and nourishment, this patient, after an illness of five weeks, made a good recovery.

I present these suggestions of a remedy here simply as an addition to our means of reducing high grades of temperature, and not as a sole means, but one that has in past years served such a good purpose, and still continues to do so. Whatever remedy is capable of reducing the temperature in fever from three to five degrees, without disturbing the equilibrium of the economy, without detriment to the vital processes of nutrition and metabolism, or in any way agitating the nervous centres, is worthy of our adoption.

Now, relative to a rational explanation of the action of this agent, it can be said that, in the first place, the heat is directly subtracted from the great central organs—the heat centres of the system—and not directly from the extremities. In the first place, from a heart that is being crushed down from hyperpyrexia; and, furthermore, the stomach, liver, spleen and intestines, and even kidneys. But this is by no means all. The great sympathetic and vaso-motor systems are being paralyzed by the ravages of high temperature, and we see in the furious rapidity of the action of the heart that the balance of inhibitory power is lost. This agent relieves the great sympathetic system of the terrible burden which it is carrying and crushing its life out, and in that way restores the equilibrium of health. Cold applied in this way over the great central organs of the body is not a depressant of cardiac and vaso-motor action, but appears to be one of the most certain and invigorating cardiac and vaso-motor tonics that we possess in fever, because it acts as a direct stimulus to the nerves of inhibition. We can readily see or imagine the action of an agent on the general system which subtracts in a few hours four or five degrees of temperature from the great gangliodic system of the abdomen, when the temperature ranges from 103° to 105°. A temperature of 105° is destructive to the organic tissues of the heart and ganglionic systems. The organic structures of these organs undergo rapid degeneration and softening from hyperpyrexia, and hence the absolute necessity of maintaining the temperature of the heart and ganglionic systems at a moderate degree.

In cases of fever, with a dangerous degree of hyperpyrexia, say, 106° or 106.5°, with delirium, insomnia, constant restlessness, contracted pupil, scanty, high-colored urine, these symptoms clearly indicate that this intense degree of temperature is exerting a destructive influence on the great nervous centres—the brain and spinal cord—and, if prompt measures are not taken to reduce this hyperpyrexia to a safe degree, the brain and spinal cord will be overwhelmed in hopeless ruin. This can only be accomplished either by the cold bath, internal antipyretics, or the cold poultice. In certain cases in my practice, the latter measure, applied over the entire spinal column, from the cervical vertebræ to the sacrum, with these symptoms, has exerted a marvellous effect in relieving the nervous system, in subduing inordinate nervous erethism, relieving delirium and restlessness, and in promoting sleep.

In a case of this kind, during a relapse from a four weeks' illness, where the temperature approached 106°, pulse 130, utter sleeplessness and constant restlessness, a long poultice, at 70°, was applied from above the cardiac region to the pubis; another, at the same temperature, ten inches wide, was applied over the nucha to the sacrum, and the head having been shaved, an ice bag was applied over the head. In two hours there was a reduction of two degrees. In twelve hours, a reduction of five degrees, with copious warm perspiration, with the result of refreshing

sleep, nervous composure, relief of delirium, and reduction of the pulse to 100. On one or two occasions subsequently, when there was manifested a disposition of these symptoms to return, the same remedies were applied with identical results, and under the usual treatment, the case terminated in recovery.

In the *treatment of acute peritonitis*, I have not as yet tested the powers of the cold poultice as an antipyretic and antiphlogistic. I feel very sure that in this class of cases poultices, at a tempera. ture of 70°, applied systematically at intervals of one hour, would exert a beneficial influence.

There is a certain degree of art to be observed in the preparation of these poultices. They should not be spread so thick and heavy as to weigh down the patient and cause a sense of oppression, but not over a quarter of an inch in thickness, and then reduced to a uniform temperature, as tested by the clinical thermometer. In cases of temperature not exceeding 102°, I often order a cold poultice at first made with hot water, and then permitted to cool either by the atmosphere or application of ordinary hydrant or pump water, and find in such cases the effects excellent.—Dr. Brown, in *Virginia Med. Monthly.*

SIMPLICITY IN THE TREATMENT OF FRACTURES.

. . . We should always bear in mind the three cardinal points which govern the treatment of all fractures:

1. Make an accurate diagnosis, if you can do so without doing damage to the parts already injured.

2. Restore the fragments to their normal position.

3. Apply such an apparatus as will keep them there and immobilize them.

How much more satisfactory would be our results if we would always keep these three points before us! There are also three things which I would impress upon your minds by my remarks, and they are these:

1. That the treatment of fractures is not as difficult a proposition as it sometimes seems.

2. That you should not treat fractures by any set rule other than the rule which says that you must keep the fragments in their natural position and thoroughly immobilize them.

3 That simplicity in apparatus will give you better results with the least amount of trouble.

1. Most surgeons upon their advent into the arena of actual practice are possessed with the erroneous idea that fractures are very difficult things to treat. I have seen surgeons make as much preparation for fixing up a simple fracture of the lower leg as some would do for their laparotomy. That sort of thing undoubtedly inspires the ignorant with awe and respect, and enables the surgeon to charge large fees for his services, and might possibly serve as an advertisement for him, but such base methods should be beneath the dignity of him who relies upon his skill for his success. Confidence is what is needed, and that, of course, comes only with experience. In this enlightened age of ours the treatment even of compound fractures is not such a difficult thing with the proper understanding of aseptic methods, for we should be able to convert a large proportion of our compound fractures into simple fractures and treat them as such.

2. We should have no set rule for treating our fractures. We should make the rule fit the case and not the case the rule. I have seen surgeons work conscientiously for a considerable time to make a certain splint fit a case of Colles' fracture when the fact was that it was not the splint at all for that case; the surgeon did not fully understand the anatomy of the parts, but felt that he must make that case fit this particular splint. I have also seen a surgeon apply a roller plaster-of-Paris bandage to a fractured leg, take it off, and re-apply it in his earnest endeavor to make it fit when it would not do so, and when another kind of dressing would have served the purpose perfectly; but he was not enough of a mechanic to see it. The surgeon should study each case of fracture, its nature, the direction of the line, and the direction of the displacement, before saying what kind of an apparatus should be put on. He should study to put on an apparatus which will be light and of sufficient strength (and right here let me say that the tendency is to put too heavy splints on fractures), and which should be as comfortable to the patient as possible. Splints which fit the parts accurately are the most comfortable, and therefore splints which can be molded to the parts are the most serviceable. Heavy wooden or metallic splints are not needed. When I use wooden sprints I do not have them over an eighth of an inch thick, and metallic splints I seldom use. To my way of thinking, splints which can be molded are the most serviceable, and I carry two materials which can serve that purpose—one, binder's board in strips, which, when soaked in water, become perfectly pliable, and can be molded to almost any surface; and the other is plaster of Paris, which, when made into a thick paste and incorporated into several layers of bleached butter cloth and folded into proper shape, makes a splint which can be made to fit any surface of the body, and when it becomes hard it will accurately support the parts and keep them perfectly immobilized. It is light, clean, and of good appearance. I have used this splint in almost every case of fracture of the leg below the knee and of the arm in the last three years, and I give it my unqualified approval. These splints can be made to fit

any angle, as, for instance, at the elbow, and can be carried up over the shoulder in the form of a shoulder-cap in cases of fracture about that joint. They are to be held in place by means of an ordinary roller bandage, and in that way the seat of fracture can always be inspected without any difficulty.

3. I have already transgressed a little on this division of my subject—namely, that the simpler the apparatus is which will accomplish the results, the better will be the ultimate outcome of the case—when I spoke of the use of plaster-of-Paris splints. I have already said that the surgeon's paraphernalia for the treatment of fractures need not be expensive or extensive. You may now ask, What have you in your kit? Well, here is the list:

Two yards of bleached butter cloth; one dozen safety pins; two strips of wood four inches wide, a quarter of an inch thick, and thirty inches long; one roll of adhesive plaster three inches wide; two strips of binder's board; two yards of unbleached muslin; four ounces of dental composition; one foot of silver wire; one dozen plaster-of-Paris bandages; three pounds of dental plaster-of-Paris; four sheets of cotton wadding; half a dozen assorted bandages; one long patella splint; two empty sand bags; one pulley and cord—which, together with a pocket knife, will enable you to handle any case that may come along, excluding those which will require operative interference. You will notice that in this list there is no Dr. J——'s splint for Colles' fracture or Dr. S——'s splint for Pott's fracture; they are a superfluity, and would add nothing to your convenience or comfort. It is a mistake that our text-books are filled with descriptions of such a larger number of complicated contrivances; the reader is at a loss to know which is the best, or may conclude that it is simply a matter of taste.

It is not my intention to detain you while I give you a detailed description of the methods of treatment of all of the fractures of the body, but I would like to mention a few to illustrate what I have been saying and to impress upon your minds the truth of my statements:

(*a*) Fracture of the clavicle—one of the common everyday cases: For the treatment of these cases what is more simple than a piece of unbleached muslin eight inches wide and eight feet long, and, when properly applied as a figure-of-eight bandage of the elbow, what can be more effective or more comfortable to the patient? I have treated ten cases of this injury by this method, and have had better results than when treating them by other methods. You can probably all recall and are familiar with at least a dozen different methods of treatment for this particular injury, and in many of them it would seem that the sole object was to make them as complicated as possible. I well remember a case which came to me from another town with an apparatus on which probably cost the doctor at least fifteen dollars, and which consisted of a bellyband of leather with a pocket on one side into which fitted an upright steel rod, adjustable in length by means of a screw arrangement; at the upper end was a crutch which fitted into the axilla. The only thing which this apparatus could accomplish was to elevate the shoulder, and this could have been done just as effectively and much more easily by means of a piece of unbleached muslin costing only two cents, and which would have at the same time accomplished all of the other things desired—namely, to draw the shoulder backward and outward.

(*b*) Fracture of the phalanges: You will find in the market a number of patent splints for the treatment of this fracture. All that is necessary in these cases is to keep the fragments in line both in an antero-posterior position as well as in a lateral, and not to allow the finger to become rotated on its axis. A small, narrow piece of binder's board or a plaster-of-Paris splint is all that is needed, and sometimes even this is not necessary, for simplying bandaging the injured finger to those on either side will serve the purpose. In other cases you can take the finger of an old glove, draw it over the injured finger, and stiffen it with glue or varnish painted on the outside.

(*c*) Colles' fracture: Here is a place where we have an infinite variety of splints. In looking over one of the modern text-books I find no less than twelve different splints pictured for the treatment of this fracture, many of them, too, bearing such distinguished names as Nélaton, Bond, Smith, Hewitt, Dupuytren, Lewis, Hamilton, and Bolles, and it is my experience after treating a large number of these cases that none of them accomplish the objects desired better than two straight pieces of board properly padded, or two plaster-of-Paris splints, neither of which will cost over five cents.

(*d*) Suppose now that we have a fracture in or near the elbow joint and it is necessary to put the arm up in an angular position, why should the surgeon carry around with him a large supply of angular splints of assorted sizes when with a yard of butter cloth and a pound of plaster-of-Paris he can make an angular splint which will fit any case and which will perfectly immobilize the joint and be more comfortable than any of the ready-made splints? This method I have used in a number of cases of all ages with entire satisfaction to all concerned.

(*e*) Fracture of both bones of the lower leg is one which is very common and apt to be compound. These cases can be simply and very satisfactorily treated by means of the plaster-of-Paris splint; some surgeons recommend putting on a

temporary dressing for a few days and then encasing the leg in a roller plaster-of-Paris bandage. If that is your method of treatment I would certainly apply the temporary dressing first. It has been my habit to combine the temporary and permanent dressings in one, both in my treatment of simple and compound fractures of the leg, in the shape of a plaster-of-Paris splint long enough to reach from the knee down the leg, underneath the foot, and up on the opposite side of the leg to the knee again, which is to be held in place by means of an ordinary roller bandage. This can be applied to the leg at any time irrespective of the presence or absence of swelling, for as the swelling subsides the outside roller bandage can be slit up and a new one put on tighter than the first without disturbing either the splint or the fragments. It fits every irregularity of the surface; keeps the fragments perfectly immobilized; it does not allow of any motion in the ankle joint and will thereby prevent much ankylosis of that joint; the seat of fracture can be inspected at any time by simply slitting up a few turns of the roller bandage at that point; it is very light, sufficiently strong, decidedly comfortable, and sufficiently cheap for any one. I have used this dressing in upward of forty cases, both simple and compound, and it has always given me perfect satisfaction. If the fracture be near the knee joint this splint can very easily be carried above that joint and thus immobilize it as well as the ankle joint. In compound fractures, after having properly taken care of the wounds, this splint can be applied directly over the dressings, and if it becomes necessary to change the dressings it can be done without disturbing the fragments at all; and how much more simple and comfortable is this than the old-fashioned fracture box, side splints, suspension or extension apparatus!

(*f*) In fracture of the neck of the femur in old persons, what is more simple than a plaster-of-Paris bandage made to include the pelvis and extending down to below the knee? How much more comfortable is it than the old-fashioned and barbarous apparatus of Desault or Neill!

(*g*) Fracture of the lower jaw: It has fallen to my lot to treat a number of cases of this kind where the fracture has been either in the body or the ramus. I remember one case which came to me after eight weeks with non-union and necrosis of the edges of the fragments, in which I removed the necrosed portions and secured the fragments by means of an iron wire passed around the teeth on either side of the line of fracture, getting a further purchase on the fragments by passing a fine wire around the other larger one over the seat of fracture, thus making the larger wire on the inside approximate the teeth—taking up the slack, as it were. The patient never wore any other apparatus than this, and in six weeks was discharged well. Another case of compound fracture of the lower maxilla I have recently handled in this same way, and the patient was discharged in five weeks. If more than this is needed I make a mold of dental composition and place it on the outside of the jaw and secure it by proper bandages. If we can get along without complicated appliances here we are certainly doing our patients a favor.

I will not detain you longer by referring to any more fractures, and will thank you for your attention to this paper, which may have seemed to some of you rather elementary; but I am a firm believer in the virtue of simplicity in all surgical procedures, and if I have impressed upon any mind here the necessity and value of simplicity in the dressing for fractures, and the fact that with a proper anatomical knowledge and a proper amount of mechanical skill the treatment of fractures is not the difficult task that many would have us believe, I shall feel that my paper has been of some service.—C. B. Lyman, M.D., in *N. Y. Med. Jour.*

HARVEY'S WORK IN RELATION TO MODERN MEDICINE.

The Harveian Oration at the Royal College of Physicians of London was this year delivered on the 18th inst. by Dr. T. Lauder Brunton, who took as the subject of the Oration Harvey's Work in Relation to Modern Medicine. After alluding in feeling terms to the late president of the Royal College of Physicians, Sir Andrew Clark, Dr. Brunton said that Harvey's person, character, and works has been so fully discussed in previous orations that he proposed to consider some of the modern developments of Harvey's work, more especially in relation to the treatment of diseases of the heart and circulation. He referred to the discovery of muscular sound by Dr Wollaston, and to the work of Doctors Clendinning, C. J. B. Williams, and Todd on the sounds of the heart, which had been of the utmost importance in the diagnosis of heart disease. Harvey knew drugs might be absorbed into the circulation and produce their characteristic effects, but the first experiments on the injection of drugs into the blood appear to have been made by Christopher Wren, better known as the architect of St. Paul's than as a pharmacologist. Wren's method was utilised by Magendie to ascertain the power of absorption from different parts of the body, and this led to Dr. Alexander Wood's introduction of the hypodermic syringe into practice. The first experiments on the action of drugs on the circulation were made by Blake at the late Professor Sharpey's suggestion. Sharpey's influence upon the progress of physiology in this country is not to be estimated

by his writings but by his teaching and influence; and two of his pupils, Burdon Sanderson and Michael Foster, have revived experimental physiology in this country, and have diffused an extensive and exact knowledge of it amongst medical men. But more than to any one else since the time of Harvey is our knowledge of the circulation due to Carl Ludwig, who has recorded automatically the pressure of blood in the arteries, and invented a plan of artificial circulation by which changes in organs and blood-vessels could be observed apart from the heart, lungs, and nervous system. Harvey's work showed that he was well acquainted with the effect of emotion upon the heart and vessels. He says, "For every affection of the mind which is attended with pain or pleasure, hope or fear, is the cause of an agitation whose influence extends to the heart."

It is only of recent years that the *modus operandi* of the changes in the heart and vessels known to Harvey has been investigated. The amount of blood in the body is now known to be insufficient to fill the whole of the vessels at once, and, like the supply of water to London, it must be turned off from one set of vessels when it is turned on to another. Thus, when a man begins to think, the blood runs from his feet to his head, as has been shown by Mosso, who puts a man on a large and delicate balance so that his head is on one side of the pivot and his feet on the other. When the man begins to think the blood leaves the legs and runs to the head so that the head goes down and the heels go up. The turncocks who effect this change are the vaso motor nerves, which act under the direction of a nervous centre in the medulla oblongata, where the regulating arrangement for the beats of the heart is also situated. The vessels of the skin and the intestines are more under the control of the central nervous system than those of the muscles, and, when they contract, the blood, being unable to run through the cutaneous and intestinal vessels, runs through the muscles more rapidly than before. It is in the muscles that oxidation and consequent development of heat chiefly take place, and, therefore, when the vessels of the skin become contracted, as on a cold day, the circulation blood is driven out of them into the muscles, where circulation and oxidation become increased, and the temperature of the body is thus maintained. When the muscles contract, as they do during exercise, the circulation through them is first stopped by mechanical compression of the vessels which run through them and supply them with blood, but afterwards it is increased by these vessels dilating and the blood flowing more quickly through them. In consequence of this, sudden exertion tends at first to raise the tension in the arteries and obstruct the circulation. In a man with a weakened heart it may thus lead to cardiac pain, varying from slight discomfort to severe angina pectoris; but if he is able to continue walking the vessels in the muscles dilate, the circulation becomes easier, and the pain may pass away. Over-exertion in even healthy persons tends to cause dilation of the heart, and in young growing boys may lead to permanent mischief. The movements of young animals naturally resemble those of the butterfly and not of the bee. Intermittent exertion, such as is seen in the fitful movements of young animals, the gambols of the lamb, and the frisking of the colt, is well adapted to increase the strength of the body. But steady, long-continued exertion is injurious, preventing development and shortening life.

The rules which have been arrived at by breeders of horses should be carefully considered by masters of schools, and such long-continued and constant exertion as enforced races or paper chases extending over several miles ought not to be allowed, although intermittent exertion in such games as cricket may be very beneficial. Ludwig's discovery of the variations which occur in the circulation of blood through the muscles enables us to understand not only the pathology of angina pectoris, but the *rationale* of the various methods of treating cardiac disease. In most cases the object is a two-fold one—viz., to increase the power of the heart, and also to lessen the resistance which it has to overcome. The resistance may be lessened by increasing the circulation through the muscles, and the methods of doing it may be roughly divided into three, according as the patient lies, stands, or walks. The first method consists in absolute rest in bed with massage; the second, in graduated movements of the muscles of the body and limbs while the patient stands still, as employed by Dr. Schott at Nauheim; and the third in graduated exercises in walking and climbing, as used by Oertel. These methods are all good of their kind, but each is adapted to very different degrees of cardiac disease. The use of massage is as old as Harvey, who records in his works the case of a man who was relieved by a very rough form of massage. It causes a great increase in the rapidity of the circulation of blood through the muscles, and thus may lessen the resistance that the heart has to overcome and greatly assist its action when weak. Harvey also called attention to the advantage obtained by the mixture of blood from various parts of the body, and this function of the circulation has of recent years become of increased importance. It is by no means improbable that the secretions of various glands which are poured out on the surface of the body, or into the intestinal tract, are of less importance than the alterations which are effected by these glands in the blood returning to the general circulation. One gland, the pancreas, pours into the intestine a secretion

containing a ferment which converts starch into sugar, and this renders it ready for absorption by the blood; while the same gland pours through the lymphatics into the blood a ferment which destroys sugar, breaking it up into carbonic acid and water. If all glandular structures have similar complex functions, our views regarding the *modus operandi* of medicines may require complete revolution, and the chief part of the benefit produced by purgatives and diaphoretics may be due not to the secretions which they cause to be poured out, but to the alterations they produce in the circulating blood. The juices of various parts of the body, although innocuous when they remain *in situ*, may become very dangerous if they pass into the circulation generally, and Woolridge found that the juice of the thyroid gland injected into the blood would cause the blood to clot in the veins and kill an animal as quickly as a rifle bullet. But what is powerful for harm is likewise powerful for good, and the administration of thyroid juice in cases of myxœdema is one of the most remarkable therapeutic discoveries of modern times.

The first definite attempt to cure a disease by supplying a ferment from a solid, non-grandular organ of the body was probably made in Harvey's own hospital more than 20 years ago, but it is only recently that extracts of solid organs have come into much use. The microbes which are the cause of infective diseases appear to form powerful poisons or toxins and also antidotes, and when introduced into the higher animals they give rise in them to the formation of antidotal substances or antitoxins. These antitoxins have the power, not only of preventing disease coming on, but actually of curing it when it has already appeared, and the antitoxins of tetanus and diphtheria have deprived these diseases of much of their terrible power. The orator, as directed by Harvey, next exhorted the Fellows and members of the college to search out the secrets of Nature by way of experiment, directing their attention to fields of research which have received at present little attention, but promise results of great practical value. Lastly, he exhorted them to continue in mutual love and affection among themselves, directing their attention to the examples of Harvey and their late president. They were beloved by their fellows while they lived, their loss was deplored when they died, and they left behind them an example not only of goodness, but of courage. Harvey, seated speechless in his chair, distributing rings and parting gifts to his friends while awaiting the approach of death; or Andrew Clark, steadfastly determining to continue at work and die in harness, in spite of the hæmoptysis which seemed to threaten a speedy death, afforded noble examples which ought to encourage the Fellows and members of the college to follow the directions of the venerable poet Longfellow, who, taking the organ which Harvey studied, to symbolize such courage as Harvey and Clark showed, says:—

"Let us then be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labour, and to wait."

—T. Lauder Brunton, M.D., in *Med. Times.*

THE DANGER SIGNAL OF THE CHLOROFORMIST.

The opinion of most of the expert anæsthetists in contradiction to the suggestions of the Hyderabad Chloroform Commission, is that the respiration alone is an imperfect guide to the condition of a patient under chloroform, and the pupil, pulse, and the patient as a whole should be watched.

It certainly seems probable that if we watch the respiration alone, we are in danger of pushing the chloroform to the point of respiratory narcosis; and since this will come on gradually, we may not recognize the condition till the patient is in a state of extreme danger.

It may be true that the patient can always be brought round by artificial respiration; this, involving as it does, the stopping of the operation in many cases, is a most inconvenient and alarming complication, and should never be allowed to occur. Any interference with the respiratory centre by chloroform, however slight, is a sign of overdosing. Again, if respiration alone be watched, how is the beginner to distinguish between shallow and irregular respiration of reflex inhibition, which so often precedes vomiting, and the insiduous onset of respiratory narcosis? If chloroform be pushed to the point of affecting the pulse, if this be possible, a dangerous overdose has been given. The heart, too, is liable to reflex inhibitions, and often becomes irregular and depressed during vomiting, and also during the violent irritation of the sympathetic system met with in abdominal operations; in either case, quite independently of the anæsthetic. Therefore, as an indication of the degree of the chloroform narcosis, the pulse is unreliable.

We require some indications which shall tell us when the cerebrum is completely narcotized, and shall also warn us when we are in danger of affecting the respiratory centre. This indication is found in the pupil. The third nerve centre which governs it is the first of the automatic centres of which we have cognizance; it is not a vital centre, like the respiratory, and its narcosis is not in itself followed by dangerous complications. The pupil, which is the visible sign of the condition of this

centre, is the danger signal for which we are looking. The pupil has a regular cycle as the patient goes under. It is first dilated and active, it then becomes contracted, and lastly it becomes dilated and fixed. The first state is a sign of imperfect narcosis, the second of complete and safe narcosis, and the third of danger of imminent narcosis of the respiratory centre. The cause of this cycle is as follows: Imperfect narcosis, going under or coming round, the pupil is dilated because impulses, mental, sensory or sympathetic, affect the half-narcotized cerebrum, and cause reflex inhibition of the third nerve centre; and active because the centre itself has not been reached by the anæsthetic. A similar dilatation is produced under ordinary conditions by fright, pain, or a blow on the abdomen. As narcosis deepens, the pupil contracts because the cerebrum is completely under, all cerebral reflexes are barred, and the third nerve centre is consequently unimpeded in its action. A similar state is seen in deep sleep. If the narcosis be pushed further, the pupil will slowly dilate and become less active to light till it is widely dilated and fixed, because the narcosis has now reached the centre itself, and has gradually overtaken it; consequently nervous control has ceased and the pupil has dilated; at the same time the light reflex has been abolished. A similar condition of pupil is seen in general cerebral compression. This fixed dilatation indicates great danger, for respiratory narcosis is imminent; indeed, under no circumstances should narcosis be pushed to the extent of full dilatation of the pupil. Thus the golden mean of safety is indicated by a contracted pupil, any material dilatation means "Look out." The patient is either coming round and developing reflexes, or going too far toward respiratory narcosis.

It is easy to distinguish between commencing reflex dilatation and early narcosis dilatation. In the first, the pupil is active and other reflexes—shallow respiration, vomiting, or movements will follow; in the second, the patient is stertorous, the pupil sluggish, and the eyeballs fixed. In the first, the indication is for more chloroform, in the second for the suspension of the drug till contraction recurs in consequence of the recovery of the third nerve centre. If the pupil be read in this way all interference with respiration or the heart can be avoided.

For all ordinary operations, a contracted pupil should be maintained, but in abdominal surgery it is sometimes necessary to combat the violent sympathetic irritation by pushing the chloroform till there is slight narcosis dilatation of the pupil. Beyond this, it is useless as well as dangerous to go. Any further abdominal rigidity is due either to inflammatory fibrosis or to the development of abnormal reflex links between the sympathetic and spinal nerves in highly neurotic subjects. In either case the condition is beyond the control of anæsthesia.

The time during which the closest attention should be paid to the respiration is while a patient is going under. At this time he is liable, intentionally or from too strong a vapor, to hold his breath. The respiratory centre is thus debili tated from lack of oxygen; then when the necessity for breathing overcomes all other impulses, a gasping inspiration is taken, the centre is flooded with chloroform, and cannot resist it, the pupil dilates, and death supervenes. Whether or not the heart is affected is undetermined, the point being to avoid the occurrence in any case. This can be done by encouraging the patient to breathe regularly, and if he holds his breath, by seeing that only a small dose of chloroform is accessible.

In children it is better to use a Junker's inhaler, so that whether they scream or hold their breath, only a limited amount of vapor can be taken in; an overdose is thus avoided. In these cases it is my practice to give chloroform till contraction occurs with slight stertor, and then to suspend the administration until some slight reflex is seen, then to give a little more, and so on. I do not think that the pupil is quite so reliable as in the adult, as sudden overdosing with fixed dilatation seems sometimes to occur. Possibly the pupil reflex is imperfectly developed; this I am sure is the case with the corneal reflex, which is quite unreliable as a sign of narcosis in children. Slight stertor is the reliable indication.—Arthur H. Ward, M D., in *The Lancet.*

A MODEL SURGICAL CLINIC.

Scene, a spacious room. At a large table in the centre is seated the surgeon; his secretary is opposite, an enormous folio register open before him. A group of students is clustered about the table. Benches filled with waiting patients occupy the sides of the room. The secretary calls No. 120,-736. A man aided by crutch and cane limps forward. The surgeon's examination into the biography and genealogy of the patient (four folio pages carefully written out by the secretary) being ended, the attendant removes the multiple wrappings of the right foot, exposing an inflamed great toe with ulceration upon one side of the nail. The surgeon gives it a hasty glance, and turning, addresses the students as follows: "Gentlemen, a few years ago a case of this kind—evidently an ingrowing nail—would have been at once submitted to local treatment, and I admit, with fair prospects of obtaining a good result. But now that we have learned the general interdependence of the different organs of the body, we feel that a thoroughly scientific treatment demands the examination by specialists of these different organs,

in order to detect any conditions likely to be etiological factors in the case. The attendant will therefore take him and a copy of his history to the different rooms in succession, and return here with their respective official reports."

(Some Hours Later.)

Surgeon (loquitur).—"Gentlemen, the patient has now returned to us, and I ask your attention while I read the reports of the various specialists."

Ophthalmological Department.—Case No. 120,736. This patient is myopic. As I recall a case where a similar visual defect was the cause of injury to the great toe in a person who "stubbed" it against the curbstone, I have ordered appropriate lenses to correct the difficulty, as a prophylactic against the recurrence of the disease. It is essential, however, that this treatment should be supplemented by wearing a loosely-fitting shoe.

Otological Department.—Case No. 120,736. I find no defect of audition. As the patient's trouble may have arisen from want of suitable support to the foot, I have thought it best to shorten the stapes leather two holes.

Rhinological Department.—Case No. 120,736. A case of nasal toe nail. Wishing to bring about a radical change in the parts, I have removed with the curette all adenoid growths, together with the adherent mucous membrane, from the cavities and packed them all with aseptic gauze—which should be removed if the patient wishes to sneeze.

Department Abdominal Surgery.—Case No. 120,736. Drs. A——, B——, and C——, in consultation. The history showing that the patient's mother during life lost a set of false teeth, Dr. A—— reasoning that "tooth and nail" are generally associated in action, is inclined to think the set may have been swallowed unconsciously and remained in the patient's stomach. Of course, he advises an operation.

Dr. B——, in view of the accepted belief that "Gallia est omnis divisa in partes tres," thinks it possible that one of them may have wandered down to the great toe, and advises an exploratory incision of the gall-bladder to ascertain if either part be missing. The "Gallic boot of love," cited by Dr. O. W. Holmes, seems to indicate a tendency of the gall to the foot.

Dr. C—— concurs entirely with both of these opinions, but on general grounds advises the removal of the appendix. The patient, however, avers that this has been already done, and that he has it in a bottle at home, which he will fetch if required. It is therefore deemed advisable to await further development.

Gynæcological Department.—Case No. 120,736. Palpation reveals no abnormal condition of uterus or appendages. A medical student calling our attention to the fact that the patient wears pants and has well developed male generative organs, we doubt if this is a proper case for this department.

Department Genito-urinary Diseases.—Case No. 120,736. Organs apparently healthy. It, however, is not impossible that the patient may have had a stone (vesical) which was passed naturally and impinged upon and injured the great toe.

Department of Neuroses, etc.—Case No. 120,736. The result of a careful examination of this case indicates a deficient ennervation of his lower extremities Two well marked areas of impaired sensibility or partial anæsthesia are located in the gluteal regions beneath the tuberosities of the ischia. His history not mentioning this, we questioned him as to how long the condition had existed. His replies were unsatisfactory—merely to this effect, that he had "sat so long upon those d——d hard benches that his —— got numb." A rubber cushion with two holes is recommended, and the case should be kept under observation.

"There, gentlemen," continued the surgeon, as he finished reading to them the reports, "you have the result of a careful scientific enquiry into this case. I shall now send the patient to the chiropodist around the corner, with instructions to have the toe cleansed and a piece of sheet lead inserted under the roughened edge of the nail. I counsel you all not to lose the opportunity of witnessing the operation. Good-morning, gentlemen!"
—*Boston Medical and Surgical Journal.*

HUMORS OF HOMŒOPATHY.

Richard Bentley, the famous scholar who had as much experience of controversy as any man that ever lived, used to say that no man was ever written down except by himself. We commend this maxim to the attention of the disciples of Hahnemann. These guileless persons often complain that they are evil-entreated by the professors of scientific medicine, their doctrines being misrepresented and their practice unjustly ridiculed. But are not their worst enemies those of their own household? Take the following samples of their teaching as set forth in all seriousness in their own organ The *American Homœopathist* gravely assures all whom it may concern that if a patient sleeps with his knees apart chamomilla is indicated; if with his legs stretched out at full length, pulsatilla; if with one leg drawn up and the other stretched out, stannum. If the patient has his head always turned to one side, cina is indicated; if he bends his head forward, staphysagria; if backward, hyoscyamus. So much for the head and the legs. The hands and arms are the object of still more mysterious refinements. If the patient lie with his hands on his abdomen, pulsatilla is indicated; the same drug is to be used

when a woman sleeps with her hands over her head, but when a man does so, he requires nux. There is something suspicious in this difference in which we fear the "New Woman" will see a fresh instance of the denial of equal privilege with the tyrant man. We confess ourselves utterly unable to appreciate the clinical significance of the phenomena that have been enumerated; it would almost seem as if the prophets of the pilular philosophy believed man to be under a curse like that of Ernulphus, and that he is banned in all his limbs—in sleeping, in sitting, in lying, etc. There is one position of the hands which, strangely enough, is not provided for; the resources of homeopathic therapeutics seem to fail before the contingency of a patient who, like the vulgar little boy of the "Ingoldsby Legends," should "put his thumb unto his nose and spread his fingers out." This omission is the more remarkable since the homeopathic practitioner would seem to be prepared for even less decorous manifestations on the part of his patients. Thus we are told that "if a patient 'cusses' you, spits in your face, and pulls your whiskers," you are to soothe her excited feelings with chamomilla. There is a refreshing candor about the following: "If a patient gets suddenly better, it is a bad sign"—for the doctor, we presume. The *North American Journal of Homœopathy* published recently an article on "Some Peculiar Sweats," in which also the subtleties of homeopathic therapeutics are strikingly displayed. Thus we are told that if only the upper half of the body sweats, nux vomica or opium is the thing; if the lower, crocus cyclamen; if the back, ananita or phosphorus; if the right side, aurum or sodium; if the left, fluoric acid and jaborandi; if the face alone, ignatia. Lastly, if the patient sweats "in spots" the sovran'st thing for this distressing condition is tellurium. For sweats in the morning, angostura (to the profane mind more suggestive of dinner-time) is prescribed; for sweats while eating you have a specific in "oleum animalis"; we can only hope that this drug agrees with those to whom it is administered better than the component elements do with each other. It is interesting to learn that if the sweat smells like horse's urine, its natural fragrance may be restored by nitric acid. Then in the *Southern Journal of Homœopathy* we find some curious information about "Peculiar Coughs." Thus, when the cough comes on at the inconvenient hour of 6 a.m., you must put your trust in cedron; if it is worse when the patient lies on his belly, give him baryta; if it is worse when lying on the left side, mercurius. We are unkindly left in the dark as to what is to be done if the cough is worse when the patient lies on his right side or on his back. When the cough is aggravated by music creosote is indicated. We are thankful for this suggestion, but it is disappointing that no information is vouchsafed as to how we are to deal with those other common exciting causes of cough—a dull sermon or a drowsy lecture. We could add indefinitely to this *florilegium*, but this would hardly lead to edification. It would be gross flattery to call this stuff heresy or even superstition; it is sheer unadulterated nonsense. It is the homœopaths themselves who write themselves down—what poor Dogberry was so anxious to be written down. Certainly the most malicious "allopath" could not invent anything that tends to laughter more that these simple gentlemen invent on themselves.—*British Medical Journal.*

MASTOIDITIS.

The two cases of mastoiditis here presented are reported chiefly for the purpose of reminding general practitioners of the importance, and, at the same time, the safety, of the operation required. Until quite recent years the opening of the mastoid cavity by surgical means was regarded as too serious an affair to be undertaken, except in the last resort; but experience shows that the operation is almost invariably a safe one, and nearly always results in great improvement, if not a cure.

Case I.—A. M., male, 25 years old; has had a discharge from his left ear since scarlet fever in early childhood. In April, '94, an abscess developed behind the ear, with a sinus extending under the muscles downward and forward to the left clavicle, where it discharged. The abscess was opened, and a seton passed through the sinus. After a time the abscess recurred and the patient came to the Waldeck Sanatorium, where I was asked to see him with his physician. There were multiple large polypi filling the very narrow meatus, a considerable swelling about the tip of the mastoid, abundant matter flowing from the meatus and from the sinus near the clavicle, and constant pain with high temperature. After consultation and consideration of all attendant circumstances, we (under chloroform anæsthesia) made a free incision through the abscess down to the bone, lifting the periosteum and searching in vain for an opening into the mastoid. After thoroughly scraping some suspicious points of roughness, the wound was packed with iodoform gauze and the polypi thoroughly removed by snare and curette from the auditory meatus, revealing a large tract of exposed and rough bone on the posterior wall of the meatus, which was thoroughly curetted. All symptoms improved after the operation, and the patient went home at the end of a week. He returned, however, in seven days, with the wound healed and a large swelling above as well as behind the auricle, much higher than the previous abscess.

Radical operation being thus clearly indicated,

a free incision behind the auricle allowed the escape of a large amount of pus from the tissues. The periosteum being then opened and pushed back freely, the mastoid cavity was freely opened by chiseling. The bone was unusually hard, and made this part of the operation very tedious. The chiseling was carried well forward, so that very free communication with the meatus and middle ear was assured. There were no traces of cell walls in the mastoid cavity, which was closely packed with cholesteatomatous masses; these were thoroughly scooped out and washed out and the wound well stuffed with iodoform gauze.

Since this operation the sinus in neck has healed, no more polypi have appeared in the meatus, the temperature has been very nearly normal and no pain except an occasional headache. The parts have been irrigated every day with bichloride solution followed by hydrogen peroxide and then stuffed with iodoform or mercuric gauze, and the wound has steadily and slowly healed until, at the end of three weeks, there was only a small sinus left, this being carefully kept open to allow irrigation. Ten days after the operation, after a severe headache and during a severe bilious attack, the eyelid was noticed to be slow in moving, and the next day there was a considerable paresis of all the parts supplied by the left facial nerve. This condition remained stationary for a week and then gradually improved until, at the end of three weeks, it was hardly noticeable, though not yet wholly recovered from.

Case II.—J., male; 23 years old; has had some little middle ear pain a few times in his life, but nothing of consequence till June, '94, when he had severe pain in and behind the left ear. At my first visit I punctured the membrana tympani, finding very little fluid in the middle ear, but relief of pain followed, and a copious purulent discharge began and continued for some three days, when it ceased and the patient went out of town considering himself well. Late in July the pain returned, especially severe in the mastoid region, but was much relieved by leeches and the application day and night of cold by means of the Leiter coil. Recurrent attacks of pain, however, and the persistence of redness and moderate swelling and tenderness over the mastoid seemed to call for relief, and Aug. 20th, I proceeded to operate in the usual manner for opening the mastoid cavity, but after the first incision and the raising of the periosteum I found nature had anticipated me by making a large sinus (about $\frac{1}{3}$ inch in diameter) through the bone, providing free communication with the middle ear so that fluids injected into the opening found exit, both through the external auditory meatus and through the Eustachian tube in the throat.

Recovery has been uneventful thus far, and with the same treatment detailed in Case I is nearly complete.—George H. Powers, M.D., in *Pacific Med. Jour.*

THE PRIMITIVE INSTINCTS OF THE MODERN CHILD.

Now that the doctrine of evolution has been placed beyond the realm of mere hypothesis, the inductive reasoning whereby its principles were established may yield somewhat to the use of deductive method; attempt to ascertain the nature of things being made by generalizations from universal to particular. The field of pathology still holds treasures that will be yielded to the investigator by this method, and how much can be gathered in biological fields is indicated by the interesting article in *The North American Review*, for November, by Doctor Louis Robinson, upon the primitive child.

Two most striking characteristics of the new-born child are its prehensile fingers and its fat, plump rotundity of body. The prehensile fingers betray a manifest simian trait, an index of pithecoid ancestry. How comes the new-born babe to be the fat, plump creature, whose mother exhibits with pride its elephantine limbs? Young monkeys are thin and slight, and their mothers convey them easily from branch to branch. The fatness of babies is a distinctly human characteristic. The use of adipose is that of providing a resource in time of need. Fat animals usually hibernate. Scarcity of food was a frequent complication of the life of primitive man. By becoming fat in prosperous times the body would be able to survive "the hard times." In the struggle for existence fat babies would survive and fat babyhood would inherit inevitable tendencies in bioplasm favorable to the reappearance of a fat type. The fat baby is indeed the melancholy monument of untold suffering, struggle and agony, whereby the human race has secured its survival.

Another typical habit of the little child is that of picking at small objects and putting them into its mouth—a faint echo of the day when the parental hunters, scouring the country for food, left the child to make gastronomical experiments among the *debris* on the floor of the cave, or among the caterpillars in the grass.

The majority of babies are pleasing to the eye. They have a style of beauty distinctly their own, decidedly superior to that of young monkeys. Infantile beauty is a post-arborean trait, and required special selective agencies for its creation. Yet it is easily explained. The ugly duckling never gets a fair chance. The prettiest children are the most petted, and in a state of society in which, during disastrous times, many would be sacrificed, the prettiest would stand the best chance of surviving—would be the ones most constantly saved by the mother.

Another baby instinct that loudly demands recognition, which is so universal as to imply its deeply-rooted origin, is the perpetual squalling and screeching in infants. This instinct, which makes the night a period of matrimonial penance, shows an expenditure of energy which nature never permits without purpose. The universal distribution of this infantile habit shows that it was certainly an effective means of securing the attainment of the primitive infant's desires. When parents neglected their babies they squalled, and those most persistent in their abjurgations undoubtedly thrived the best, by bringing their progenitors to that state of servile obedience in which contemporary parenthood still lingers.

Children almost invariably exhibit fear of strangers. This is another ancestral trait. In days when merciless war was waged between tribes, the stranger was synonymous with the enemy. The dread of the stranger would become instinctive, and the peculiarity transmitted to the race.

The fear of being alone in the dark is a common failing of little children. Night is not less harmless than day to the modern infant. The fear of darkness is supremely unreasonable. Instinct, however, stronger than reason, proclaims itself through babes and sucklings. In ancient days, when the iguanodon might be prowling around the camp, the imagination of the child might most reasonably have invested objects dimly seen in the dark with gruesome and dangerous attributes. The fear children manifest for the dark is an indefinite one, suggesting a vague apprehension of danger rather than actual risk. It is a short-lived characteristic, as young men and women usually have no dread of going out at night.

Perhaps the most characteristic trait of childhood is the dread of wild animals. There is probably no child whose apprehension cannot be aroused by a reference to bears. Doctor Robinson finds he can frighten his children most effectually by appearing to them in a shaggy coat and acting the animal, and this even when the deception is practised in full view of them. There is little doubt that children retain an inherent dread of animals, just as adult man has an inherent terror of the snake. The germs of such instinct were doubtless amply implanted in days when the tiger and bear were formidable enemies of our race.

These and many not enumerated, are traits distinctly characteristic of child-life. They testify to impressions indelibly engraved upon bioplasm in the long era of savagery, a period longer than that of which we have any conception, founded upon objective analysis. They are voices of a far distant past, penetrating the innermost recesses of consciousness, proclaiming the virulence of a conflict that has left its undying record upon man's nature, and testifying to an ancestry man, even yet, has barely outlived.—Ed. *Physician and Surgeon.*

MEDICAL NOTES.

In cases of *Aneurism*, no matter what its origin be due to, Prof. Hare says the iodide of potassium is the best drug, that can be administered, and in those cases in which it does not cure it will give great relief.

Prof. Parvin says, as a rule in cases of *Prolonged Pregnancy* the development of fœtal head is greater than when the pregnancy occurs at the regular time.

Prof. Keen says no matter how circumscribed and limited a *Scirrhus* may appear to be, it is one of the rarest pathological curiosities to find it encapsulated.

Prof. Keen says, in *Operations on the Stomach*, if no contraindications are present, chloroform is to be preferred to ether as an anæsthetic, since it is less liable to be followed by retching and vomiting.

Sulphonal, Prof. Hare says, is a somnifacient or hypnotic, valuable in functional nervous insomnia, but in such diseases as cardiac trouble it does not assert its hypnotic powers, but becomes responsible for the patient's wakefulness.

In cases of *Anal Fissure*, Prof. Hare says, a cure can often be brought about by applying a drop of strong carbolic acid to the fissure, and a wash also used, consisting of tannic acid, glycerine and water, if hæmorrhoids are present.

Prof. Parvin says *Spontaneous Abortions* occur usually during the first three months of pregnancy and as a rule at a time which would correspond to the time that in a non-pregnant condition a monthly flow would have occurred.

Prof. Keen says, when a patient has swallowed a *Foreign Body*, no purgative should be given, as it will increase the peristaltic movements of the intestines, and greater danger will arise from its impaction. The patient should be given a light dict of bread and milk for four or five days, and then a laxative may be administered. Or, instead of the bread and milk, the patient may be put on an absolute diet consisting of mashed potatoes.

Prof. Hare recommends the following prescription as a spray in cases of *Diphtheria*. After its use very often an expectoration of creamy mucus mixed with small pieces of false membrane takes place:—

R—Sodii bicarbonatis,
Sodii boratis, ... āā gr. xl.
Aquæ, ... f ℥iv. M.
Sig.—Use in an atomizer.

In cases of *Gastric Ulcer* accompanied by vomiting, Prof. Hare says the vomiting must be checked on account of the danger of hæmorrhage, and for this purpose he advises rectal injections of the following prescription :—

℞—Sodii bromidi . . . . . ʒ j.
Tinct. opii, ... f ʒ j.
Aquæ, ... q. s. ad f ℥ iv. M.

According to Prof. Hare, the following prescription will be found very useful in cases of *Subacute Gastritis*, occurring in persons who are careless in eating and are annoyed with belching of food after eating :—

℞—Oleoresin. capsici, ... gtt. xv.
Pancreatin., ... gr. xx.
Pulv. zingiberis, ... gr. xv.
Pulv. carbonis ligni, . . . gr. xv.
M.—Fiant pil. xx.
Sig.—One, twice a day.

—*Coll. and Clin. Record.*

Seasonable Suggestions.—With the opening of the winter season, and its attendant bronchial and pulmonary troubles, we are having from many sections reports of a recurrence of the La Grippe epidemic which for the past six or seven years has afflicted the country. This fact makes particularly pertinent a recalling of the salient points of Dr. V. W. Gayle's paper first published in the *Medical World* in the midst of La Grippe's most malignant visit. It will be well to note closely his recommendations and experience in connection with the recurrence of the epidemic which is now apparently upon us. He says : "This disease, by proper treatment of an attack, can be so modified as to be almost aborted. If not properly managed, influenza is particularly liable to grave complications, even in mild cases the tendency is towards prostration, and often the nervous shock is such as to materially debilitate the patient. Where there is much angina with acute bronchial irritation, the following is indicated :

℞—Ammon. chloridi, ... ʒ ij.
Potassii chlorat, ... ʒ j.
Tinct. ferri chloridi, ... ʒ ij.
Syr. simplic, ... ℥ ij.
Aquæ, ... q. s. ft. ℥ iv.—M

Sig.—Teaspoonful in sweetened water every four hours, also apply to the throat with probang every three hours.

Quinine is the best germ destroyer we have for the microbe of influenza. During the recent epidemic I aborted quite a number of cases with antikamnia and quinine in combination; also with antikamnia and salol. The relief obtained by the administration of antikamnia alone, where the cephalalgia was severe, as in the majority of my cases, was wonderful. When the pain seemed almost intolerable I have seen a ten-grain dose banish it.

Mustard pediluvia are of great advantage, and a plaster of mustard and lard, one part of the former to two of the latter, applied directly to the chest, answered admirably as a mild counter-irritant.

Expectorants are often needed, and antikamnia should be administered with them, thus :

℞—Antikamnia (genuine), . . . ʒ j.
Syr. senega, ... ℥ j.
Vini ipecac, ... ʒ iij.
Syr. tolutan, ... q. s. ft. ℥ iv.

Mix and let stand until effervescence ceases.

Sig.—Teaspoonful every two hours.

The mild chloride of mercury in minimum doses often repeated will be beneficial. The following prescription is a favorite of mine :

℞—Hydrarg. chlor. mit.,. . . . gr. j.
Sodii bicarb., ... ʒ i.
Lactopeptine (genuine), . . . ʒ ss.

M.—Ft. Chart No. X.

Sig.—One every hour until all are taken, followed by a full dose of Hunyadi Janos water.

Antikamnia and quinine tablets, containing 2½ grains each of antikamnia and quinine, also antikamnia and salol tablets, containing 2½ grains each of antikamnia and salol, offer the best vehicle for exhibiting these combinations, giving one every two or three hours.

Gayle concludes his paper as follows : "What is mostly needed is an antithermic analgesic to relieve the pain and reduce the fever. These properties are found in antikamnia. This, with the germ destroyer, quinine, is all that I really needed in the treatment of this disease. I advocate the use of stimulants in nearly every case. They are frequently needed in the onset of the disease. Sprays of carbolic acid, turpentine or resorcin are frequently efficacious in the laryngeal troubles. The diet should be light and easily digestible, By careful attention and avoidance of exposure, together with the line of treatment mapped out, the vast majority of cases will recover. Of course. there are occasional cases which present symptoms which require other remedial agents, but these, of necessity, must be left to the discretion of the medical attendant."

Bismuth Subgallate or Digestive Ferments? —The present *furore* in favor of bismuth subgallate is likely to prove its worst enemy because its general use in all forms of indigestion will eventually create a reaction against it, causing it to fall into disuse. That the remedy is a useful one in certain forms of functional dyspepsia cannot be denied, but to be successful clinically the diet must

be properly regulated, and with this proper precaution—although the writer has used the subgallate quite extensively during the past three months—the results have been but little, if any, more satisfactory than he has experienced with the same dose of bismuth subcarbonate.

Unfortunately, the profession has gotten into the habit of prescribing bismuth in the form of subnitrate instead of the subcarbonate, and the favorable results following the employment of the latter are not appreciable when the former is given. The reason for this is obvious, since the subcarbonate is an amorphous powder, while the subnitrate is a crystalline substance, and no matter what may be the amount of the dose it always enacts the *role* of an irritant. But even with the administration of subcarbonate, and the rule is equally applicable in the case of subgallate, one or the other of the digestive ferments should be added. In all cases the addition of either pepsin or pancreatin, or the simultaneous exhibition of malt extract, will materially enhance the bismuth effects, and we, therefore, submit this proposition to the profession in the firm belief that it will prevent much disappointment on the part of physicians and patients.

That bismuth preparations act as disinfectants in the alimentary canal is freely admitted, but that they stimulate or measurably improve the digestive function proper there is room for serious doubt, and it would be well, therefore, in estimating the therapeutics of the remedy to take into consideration the physical demands of the patient. With our superior pepsin preparations and the elegant pancreatic extracts now at our command, it seems the part of wisdom to consider the ultimate effects of indiscriminately prescribing the popular remedy of the day.

To give the present article a practical turn, the following formulæ are suggested as a marked improvement over the use of bismuth alone in the treatment of dyspepsia and indigestion:

℞—Ext. nucis vomicæ, ... gr. ¼.
Pepsin pur., ... gr. i.
Bismuthi subcarbonas, vel bismuthi subgallas, ... gr. iv.

M.—Et fiat Tab. vel Chart. No. 1.

Sig.—Take one tablet or powder before and after eating.

℞—Ext. nucis vomicæ, ... gr. ¼.
Ext. pancreatini, ... gr. iss.
Bismuthi subcarbonas, vel bismuthi subgallas, ... gr. iijss.

M.—Et fiat Tab. vel Chart. No. 1.

Sig.—Take one tablet or powder before, and one two hours after meals.

The first of these formulæ will be found available when the fault lies with the stomach, the second when intestinal digestion is deficient. In the former case the diet should be regulated with a view to lessen the work demanded of the stomach; in the latter the starchy food-stuffs and fats must be diminished, the diet being principally of a nitrogenous character.—*The American Therapist.*

The Chaneels of Infection in Tuberculosis.—At the opening meeting of the North London Medico-Chirurgical Society on October 18th, Dr. Sims Woodhead delivered an address on this subject. After briefly adverting to the occasional direct inoculation of tuberculosis into the skin or subcutaneous tissues, he proceeced to consider the circumstances under which tuberculosis may find a point of entrance from the throat. In certain animals and in man (dirty or mixed feeders) there was, he said, a ring of lymphoid tissue surrounding the entrance to the larynx, and a similar ring surrounding the entrance to the œsophagus. The pharyngeal tonsil was a great local development of the two poles of the latter ring. So long as all this lymphoid tissue remained healthy, or was not attacked by an extraordinary number of micro-organisms, it was capable, with the assistance of the epithelium, of dealing with even virulent micro-organisms. But, if overstrained, the lymphoid tissue itself might become the seat of tuberculous disease, or be so disorganized that it allowed the tubercle bacillus to pass into the glands surrounding and immediately connected with them. This method of entrance of tuberculous infection, which had first been worked out in the case of the pig, was probably of comparatively frequent occurrence in children living under insanitary conditions. The very cells which in health destroyed the bacilli—the lymphoid cells—were those which, when the function of the lymphoid tissue was lowered, were responsible for conveying the bacilli from the outer surface to the deeper structures. In children the tuberculous process, started in this way, might extend at first entirely through the lymphatics, the lungs escaping until the glands at their root, or in the pleura, had become distinctly affected. In early life also the primary seat of infection was very frequently in the alimentary tract. The importance of this mode of infection was, in Dr. Woodhead's opinion, not yet fully appreciated. Even when the chief stress of the disease fell upon the lungs, it might be that the infection had obtained entrance from the alimentary canal, and had spread upward by the lymphatics to the glands at the root of the lung. In many farms in Denmark, fortnightly inspection of the cattle had revealed facts which had led the Danish Government to make an annual grant of £3,000 for five years to defray

the expense of carrying out a systematic inspection of cows, of using tuberculin as a diagnostic agent, of killing off cattle undoubtedly affected, and of keeping under observation any animal in which there was any suspicion. If this scheme were thoroughly carried out, Dr. Woodhead believed that the trifling expenditure involved would prevent a large loss to the farmers, and lead to an incalculable saving of infant life. If Koch's tuberculin had done far more harm than it ever had done, the saving of human life, indirectly, through its efficacy as a diagnostic agent in cattle, would still be so enormous that the account to the credit side would have to be reckoned not as hundreds to units, but as thousands. The lecture was illustrated by numerous lantern slides.—Ed. *Brit. Med. Jour.*

The Contagion of Cancer.—Any information capable of shedding a new light on the nature of that mysterious disease, cancer, is eagerly welcomed by the profession. Some facts in this connection brought forward by Dr. Guelliot, of Reims, at the Lyons Surgical Congress, on Oct. 9th, will accordingly be found interesting and instructive by the readers of *The Lancet*. The experiments of Hanau and those of Morau, recently reported in the *Archives de Médicine Expérimentale*, prove that cancer can be grafted on to animals of the same species. Experimental hetero-inoculation is thus an established fact; spontaneous or accidental hetero-inoculation is, therefore, possible. It is to clinical observation that inquirers must have recourse in order to clear up the question, and false deductions are more easily avoided when these observations are made in country districts where the pathological antecedents and mode of life of the population are well known. The very unequal distribution of the disease is an extremely striking phenomenon. Thus 100,000 persons in Paris or Rheims supply 100 victims, the corresponding figures for a village in the Ardennes and a district of the Aisne respectively being 266 and 1,400. Instances have again been known of the inhabitants of a particular district of a town, or a group of houses, being especially visited by the disease. Nay, habitations that may fitly be designated as cancer houses have been known to exist, where three or four denizens have been successively victims of cancer. Dr. Guelliot has collected fifteen such examples, yielding fifty victims. It would seem that nothing short of contagion could explain the foregoing. More instructive still are examples of cancerous affections appearing successively in two persons living constantly under the same roof *(cancer à deux)*. Dr. Guelliot cites 103 such instances, 42 of these having been noted by himself. Of these 103 examples, 14 had reference to co-lodgers, relatives, and masters and servants, and 89 (or more than four-fifths) to husband and wife. The transmission may be direct (through penis and uterus), but more frequently it is effected indirectly through wearing apparel or table utensils. Twice inoculation occurred through a tobacco pipe. In more than one-half of 64 cases of *cancer à deux* the interval separating the appearance of tumors in the two persons was under two years. In 26 instances the cancer was homotopic (affecting the same organ); in 97 heterotopic. Dr. Guelliot opines that the influence of heredity is exaggerated. At most only 12.5 per cent. come under this heading, and if account be taken of persons who, born of cancerous parents, reach extreme old age, the proportion is reduced to 5 or 6 per cent. (from the statistics of fifty old men, ranging from 70 to 90 years of age). He knows of nine examples of practitioners attending special cases of cancer who contracted the disease. Dr. Guelliot concluded his powerful argument in favor of the contagious nature of cancerous tumors by remarking that, although the appreciation of the danger incurred by individuals brought into contact with patients of this class may frighten the public, it is always preferable to look facts, especially disagreeable ones, in the face, and counteract risks of the kind by precautions based on the dictates of common sense.—Paris correspondent of *Lancet*.

Snake Cannibalism.—F. Z. S. writes to us as follows:—A brief and substantially accurate note in the *Times* of Tuesday last, records the fact that a boa constrictor at the Zoological Gardens has lately swallowed one of its mates. This occurred over a fortnight ago, and the facts are briefly as follows: One compartment of the reptile house contained three boa constrictors, of which one was about nine feet and another eight feet long. During the night the smaller of these two disappeared, and the larger was found to be enormously distended and unable to curl up. The cannibal snake was considerably inconvenienced by his meal, and remained for a week in a lethargic condition and suffered from dyspnœa. It is supposed that the boa had no deliberate intention of eating his companion, but that he began by swallowing part of a pigeon which was projecting from the mouth of his companion, and that the rest of the action was involuntary. It is a very unusual circumstance for one boa constrictor to swallow another, and were this not so they would have to be kept apart—for the sake of economy, if for no other reason. In this case the money value of the deceased snake was probably £7 or £8. Although there was probably only about a foot in the difference of the length of the two snakes, the one which was eaten did not weigh more than half as much as the other. The internal capacity of some snakes is enormous, and there are on record instances of their having

swallowed animals of greater weight than themselves. Dr. Stradling has related the case of an Elaps lemniscatus which swallowed and afterwards disgorged an Amphisbœna longer than itself and weighing half as much again. Boas are certainly not always very particular as to the nature of their food, and some years ago one at the Zoological Gardens swallowed her blanket. She was, however, made to disgorge it, when Mr. Buckland described it as being like a long flannel sausage. Like other creatures which have the power of consuming an immense amount of nourishment at one time, snakes have also the power of fasting for a considerable period. Catharine Hopley, in her interesting book on the curiosities of serpent life, lends her authority to the story that they may live for two years without food, and there is at any rate evidence to show that a rattlesnake lived at the Zoological Gardens for some months without food.—*Lancet.*

A New Cure for Pernicious Anæmia and Leucocythemia.—"While sitting alone, and in profound sorrow, in my library, on Sunday morning, the 29th of April last, I suddenly saw a great light." It is in this somewhat dramatic way that Dr. I. N. Danforth, whose patient was suffering from pernicious anæmia, begins his description of a new method of treating that disease. The light which he saw was reflected from the following paragraph in a London journal: "Professor Frazer, of Edinburgh, read a paper to the Section of Medicine" (of the Eleventh International Medical Congress, at Rome) on "The Effects of Bone Marrow in Pernicious Anæmia," which attracted considerable attention. He gave particulars of a case in which at the beginning of the disease the hæmatocytes numbered 1,000,000 per cubic millimetre, and the hæmoglobin 25 per cent. After a month's treatment, first with iron, then with arsenic, afterward with salol, no appreciable improvement was manifested. At the end of that time bone marrow was administered with most remarkable results. The patient gradually improved, and in two months the blood had a composition of 4,000,000 hæmatocytes, and the hæmoglobin had risen to 80 per cent. This case shows, so far as a single case can, that in bone marrow we may perhaps have an effective remedy for what has hitherto been practically held to be an incurable disease.

Dr. Danforth immediately got some bone marrow and began feeding it to his patient, whose condition, despite everything that had been tried, was desperate. She at once began to improve, and in four or five months was comparatively well.

After a time, instead of giving the marrow in its natural state, he cut up several ribs and allowed them to soak in glycerine. He then made the following mixture:

℞—Liq. potas. arsenit., ... ʒ ijss.
Acid phosphate, ... ℥ iij.
Ext. bone marrow, ... ℥ viij.
M. Sig.—ʒ ij. after each meal.

The addition of the arsenic robs the bone marrow of some of the credit. This addition was not made, however, in Professor Frazer's case.

We note also that Dr. W. G. Bigger reports, in a London journal, a case of leucocythemia in a boy aged 12. The patient was given three or four slices of bread daily, on which the raw bone marrow was thickly spread. The improvement in the boy's condition after the first week was "little short of marvellous." The anæmia and jaundice disappeared, and the skin and mucous membrane acquired a healthy color. The symptoms due to the anæmia at the same time passed off, and in three weeks the boy was able to walk about without shortness of breath or palpitation. The temperature also became normal, and has remained so. *Pari passu* with this improvement in the general symptoms, the spleen diminished in size, so that by the end of a fortnight the lower edge had receded to a level with the anterior spine of the ilium, and the inner edge did not extend beyond the middle line.

The boy eventually became entirely well. Both the cases reported are apparently examples of cures of obstinate and dangerous diseases. If we have a remedy for them in bone marrow, therapeutics has made a remarkable advance.—*N. Y. Med. Rec.*

The Treatment of Sycosis Menti.—Sycosis menti, whether of the simple or the parasitic variety, I have always found to be quickly amenable to treatment. Ointments are slow and nasty; epilation is tedious and painful. Both forms of treatment, whether used separately or together, will, as a rule, have succeeded in disgusting a patient by the time he is beginning to derive some benefit from their employment. The following line of treatment I have invariably found to exert most influence in checking the progress of this disease, and in totally eradicating it in parts where it has been already established. Having cropped the beard close to the skin, and having had the affected area thoroughly washed with superfatted soap and warm water, I apply a strip of lint well soaked in the acetum of the B. P. to the diseased part. This having been carefully covered with a large piece of oiled silk or rubber protective, I allow to remain on for twelve hours. On removing the vinegar dressing I substitute for it a similar piece of lint soaked this time in a solution of the perchloride of mercury (1 in 1200) and applied in

precisely the same manner, and for an identical period. These dressings I repeat every day for four days, at the end of which time I always find that the disease is dying away. Then I decrease the frequency of the applications to one or two a week, and at the end of the third week I find that there is no longer any necessity for further treatment, as the skin is quite sound and the dermatitis has become a thing of the past.—M. G. McElligott, in *Lancet.*

AN APPEAL to the pity and better natures of the Editors and publishers of the *British Medical Journal* and the *Lancet.*—You know, gentlemen, that the paper upon which is printed the "foreign edition" of your otherwise splendid journals, is simply inexpressibly vile. It is at once thicker, and yet more mushy and rotten than tissue-paper, and is, therefore, properly fit for no purpose whatsoever — absolutely none — of civilized or unregenerate man. We can only explain its use on the ground of a contempt of us, the reason of which dates back to Revolutionary times, or perhaps to Simian ages. You certainly would not, and could not, treat residents of the British Islands thus. We beg of you to remember that however remote the relationship we are at least your Teutonic brethren, and that it is your duty to help on the cause of Anglo-Saxon civilization. Please do not forget that even an American can sometimes grumble, and even revolt, after prolonged indignity and injustice.—*Med. News.*

NOCTURNAL ENURESIS:

℞—Liquoris atropinæ sulphatis, . . ʒ iss.
Liquoris strychninæ hydrochloratis, ... ♏ xlv.
Syrupi aurantii, ... ad. ʒ j.

No drink to be taken after 6 p.m.; 5 drops of syrup at 9 p.m. Increase by 5 drops every three nights until 50 drops of the solution be taken nightly, or more if necessary. The secret of success, in obstinate cases treated by the author, was courageous overdosing. In one patient (girl of 17 years), 25 minims were taken nightly, with ultimate success. Strychnine diminishes depressant effect of large doses of atropine, and increases sensitiveness of vesical centres to reflexes from bladder-walls, causing patient to awake at proper time.—*Practitioner.*

DIABETES.—Unschuld (*Berl. klin. Woch.*) draws attention to some of the less noticed symptoms in early diabetes. He quotes a number of illustrative cases in which the disease was masked by the presence of dyspeptic symptoms, nervous symptoms classed as neurasthenia, etc. Sometimes diabetes may quite accidentally be discovered. Here marked thirst and abundant urine were mostly absent. Frequently cramp in the calves is complained of, a symptom at present but little recognized. During the past eight years the author has found it in as many as 26 per cent. of his cases. In 1891 he found it 33 times among 109 cases. It most often occurs in the morning, but sometimes at night. If such cramps occur and the patient complains of weariness and weakness, the urine should be at once examined for sugar. These cramps may be present in all forms of diabetes, except in the acute disease occurring in young subjects. Massage and attempts at walking generally relieve the cramp. The cause is obscure; perhaps it is due to the diabetic toxins. The recognition of these cramps may lead to the early diagnosis of diabetes.—*British Med. Jour.*

TREATMENT OF ASPHYXIA BY TRACTION UPON THE TONGUE.—Laborde (*Abeille Medical*, 1893, No. 3) believes that asphyxia is to be combated by strong rhythmical traction upon the tongue. Apart from the good results in asphyxia of the new-born, Laborde has applied the method with good results in an adult poisoned with bromidia, who was pulseless and without appreciable movement of heart.

The action of this method is referred by Laborde to the primary excitation of the sensitive nerves and transferrence of this excitement to the motor nerves of the respiratory muscles, especially excitement of the nervus laryngeus superior, then the glosso-pharyngeus and lingualis, finally, the phrenic.—*Univ. Med. Mag.*

FOR PITYRIASIS CAPITAS.—
℞—Sulphuris præcipitati, . . . ʒ jss.
Adipis lanæ hydriosi, . . ad ʒ ij.
Misce et fiat unguentum.
J.—To be applied to the affected parts every second day.—*The Practitioner*

THE LEUCOCYTE'S LAMENT.

The leucocyte was in a gland with inflammation red,
He grasped a comrade by the hand and with a sob he said:
"'Mid solitary follicles I wend my weary way,
Deep down in crypts of Lieberkuhn far, far from light of day.
Alas! this aching nucleus can ne'er be free from pain,
While tissues hide my beauteous bride I ne'er shall see again.
A rosy-red corpuscle she, the pride of all the spleen,
Her like in this dark gland, I fear, will never more be seen.
A fierce bacillus captured her, and reft her from my side;
Carbolic oil his plans did foil, but, ah! it slew my bride.
With pseudopodia feebly bent and bowed down nucleus, I
Must turn to pus."—And, speaking thus, he wandered forth to die,
Oh! lightly they'll talk of that leucocyte true
As they label and mount and degrade him,
But little he'll reck, when with aniline blue
They've stained and in Canada laid him.

—*Bristol Medico-Chirurgical Journal.*

THE CANADA LANCET

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AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MAHLER 12 Rue Richer, Paris.

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The LANCET has the Largest Circulation of any Medical Journal in Canada.

CURETTING THE UTERUS.

This operation, which has been characterized by such men as Scanzoni and Chassagnac as "unscientific and barbarous," has its ups and downs, its ebb and flow in popularity with the profession. There is no doubt that, properly performed, it is of great assistance in the treatment of many uterine and cervical diseases, such as endometritis, fungosities, congested mucous membrane, menorrhagia, etc. The dangers attendant upon this procedure are slight, especially if there has been no previous tenting. Occasionally pelvic peritonitis or cellulitis follows, so that the operation should always be done with the strictest antiseptic precautions, and it is better that it should be done at the patient's residence, and that rest in bed be insisted upon for a few days, and of course longer if any unpleasant symptoms supervene. We remember seeing a case of rapidly fatal cellulitis take place after curettage for fungosities, in a woman aged about 50, by the late Angus MacDonald of Edinburgh, who took occasion to caution his clinical class as to the possible fatal results flowing from even this simple operation.

Dr. Dorsett, of St. Louis, in a paper read before the American Association of Obstetricians, at Toronto, in September last, introduced a somewhat new idea as to the value of curettage in diseases outside the womb. He says:

"Did it ever occur to the neurologists, after a faithful trial of bromides, chloral, nux vomica, lady's-slipper, infusions and decoctions of herbs and roots, prepared possibly by their own hands or under their personal supervision, the use of the electric battery, the electric fan, etc., on a hysterical or neurasthenic female, that possibly the patient was suffering from a pelvic inflammation occasioned by a foul womb, a mucous membrane that had been absorbing and distributing constantly toxic elements, that are coursing through the system of the fair female, poisoning her whole system, producing symptoms that might easily tally with those of neurasthenia?

"Neurasthenia? Of course neurasthenia — *nerve prostration*—brought about by a continuous absorption of toxic elements, producing general prostration, headache, restlessness, insomnia, frequent sighing, cold and clammy feet, gloominess, muscular weakness, inability of thought concentration, loss of interest in business or the family, etc."

The above contains a real germ of thought. We have been accustomed, since we have known what *ptomaine* means, to account for the headache, depression of spirits, anorexia, dullness of intellect, sleepiness and a dozen other symptoms with which we are all familiar, as following either constipation or decomposition of fæces in the intestinal tract, by the fact that these poisonous ptomaines, produced in the intestines, were absorbed, and by circulation in the blood, act upon the nerve centres as to cause the symptoms just enumerated.

Then why not absorption from the endometrium, as suggested by Dr. Dorsett? The anatomical position and the function of the unimpregnated uterus, will allow of this absorption of deleterious material to continue over a long period of time, setting up the various neuroses suggested by the author. While of necessity, or at least from the action of purgatives, the bowels are occasionally cleared, thus freeing the system of such depressant substances, with the result as we all know of an almost immediate clearing up of the symptoms.

Curettage, then, in such cases acts upon the system through the uterus, just as pil. hydrarg., followed by a saline, acts upon the system through the intestinal mucosa, namely, by removing from

it and thus preventing their absorption of poisonous products of decomposition.

So also when a patient presents herself with foci of tenderness in the pelvis, with vague symptoms of a pelvic inflammation, the gynæcologist is often able to remove the trouble by thoroughly cleansing out the uterus, rendering it aseptic, and thus stopping the supply of irritating material which is making its way through the lymphatics, to the cellular tissue. Then by attending to the excretions of the body and by stimulating the absorbents, he is often able to materially improve the patient's condition, and often indeed able to absolutely cure her.

If the above views be correct, the moral obviously, is to avoid delay in this simple operation, and not to wait for the pelvic inflammation to be lighted up; but curette the uterus whenever there is reason to suppose that its absorbents are carrying poisonous matter to the surrounding tissues, remembering the force of the adage, *bis dat qui cito dat.*

THE PAY SYSTEM AT HOSPITALS.

Is it not about time that the system in vogue at many hospitals, of the staff attending well-to-do patients in private wards *gratis*, should be discontinued? How often does it happen that wealthy patients elect to go into a private ward, and receive skilled attention from the physician or surgeon who has charge of such ward, with nursing, food, attendance, and medicine, all for from eight to twelve dollars a week. Capital operations may be done, and the surgeon who should receive a fee ranging from one to three or four hundred dollars, has all the work and anxiety of the case for nothing; or the physician goes daily for weeks to attend a case of typhoid, or myelitis, or other form of slow or chronic disease, and for all his time and trouble gets *nil*. And this in the case of patients who are well able to pay, but who, as is usual with humanity, take all they can get for nothing, and often indeed without a "thank you" for all the trouble they have caused, looking upon it as their *right*, because forsooth, they pay, in a hospital, less, for everything, than they would do in their own homes for the services of one trained nurse. It is no wonder so many are ready to seek relief under such circumstances. But it is a positive injustice to the medical men who form the staff of the hospital. Surely the men who attend to the patients in the free wards of a large hospital do enough work for charity, and should not be expected to give their time and exercise their professional skill gratuitously for the benefit of those able to pay, and who would be willing to pay, but for the pauperizing tendency of the system we speak of. This is how, as our contemporary the *Medical Times*, of London, puts it, "Medicine is dragged in the mud and sixpenny dispensaries are manufactured."

It may be said that there are always scores of medical men, who would be willing to go on the staff of the hospital under the conditions now existing. This is true, but they are not the best men of the locality; but rather men who have their way yet to make, and who wish to use the hospital for practice, and in the hope that a hospital connection will improve their position as a medical man. So young men are quite willing to devote hours a day and for two or three days a week at dispensary work. Few men of established reputation find it worth while to remain on the active staff of a hospital, who are not engaged in medical education at some college which sends its students to that hospital. We have known good practitioners give up their hospital appointments as being burdensome and irksome, and as interfering with the practice upon which they had to depend for a livelihood. All things considered, it seems only reasonable then, that patients who can afford to pay for a private ward, should be made to pay for the medical attendance they receive while in the hospital, otherwise an injustice is done to the staff and to the profession in the neighborhood of the hospital. For they, the practitioners, not on the staff, often lose patients, by the great convenience and cheapness of treatment and attendance, offered by the hospital in the same block. To avoid expense, the worry and upsetting of the home, the necessary weary watching of the wife or mother or sister, the sick one says, "I'll go into a private ward. It will cost me much less than staying at home, and I shall be looked after better, having a trained nurse always at my command, as well as a doctor, and the advice of Dr. So-and so"—of the staff.

And so the outside doctor says good-bye to his patient for that illness at any rate. What with

specialists, pay wards in hospitals, isolation hospitals, *et al.*, the general practitioner, who in our humble opinion ranks above all specialists, except in the matter of fees, has rather a poor outlook. Let him look to it that he is not utterly put down and crowded out of his legitimate rights.

THE ONTARIO MEDICAL COUNCIL.

The *personnel* of the incoming Council will be considerably changed, not only by the election of the five new territorial representatives, but also by changes in the representatives from the old divisions. The Defence Association will be fairly well represented, Drs. Sangster, McLaughlin, Armour, Reddick, Hanly and Thornton being in evidence. So that the June meeting may be expected to be musical to a degree. The different constituencies are represented as follows :—

Territorial representatives.—No. 1, Dr. Bray, Chatham, and Dr. Samson, Windsor; No. 2, Dr. Williams, Ingersoll; No. 3, Dr. Roome, London; No. 4, Dr. Graham, Brussels; No 5, Dr. Brock, Guelph; No. 6, Dr. Henry, Orangeville; No. 7, Dr. G. Shaw, Hamilton; No. 8, Dr. J. Armour, St. Catharines; No. 9, Dr. Hanly, Waubaushene; No. 10, Dr. Barrick, Toronto: No. 11, Dr. Machell, Toronto; No. 12, Dr. Sangster, Port Perry; No. 13, Dr. McLaughlin, Bowmanville; No. 14, Dr. Thornton, Consecon; No. 15, Dr. Spankie, Kingston; No. 16, Dr. Reddick, Winchester; No. 17, Dr. Rogers, Ottawa.

The Collegiate representatives on the Council are: Dr. W. Britton, Toronto University; Dr. J. W. Rosebrugh, Hamilton, Victoria University; Dr. V. H. Moore, Brockville, Queen's College; Dr. W. T. Harris, Brantford, Trinity; Dr. James Grant, Ottawa University; Dr. J. Thorburn, Toronto School of Medicine; Dr. F. Fowler, R.C.P.S., Kingston; Dr. W. B. Geikie, Trinity Medical College, Toronto; Dr. W. H. Moorehouse, Western University, London.

Homœopathic representatives. — Dr. George Logan, Ottawa; Dr. C. T. Campbell, London; Dr. G. Henderson, Strathroy; Dr. L. Luton, St. Thomas; Dr. J. H. Emory, Toronto.

PILOCARPINE IN RHEUMATISM.—Drappier, *Jour. des Sciences Méd.*, has employed the above remedy in $\frac{1}{6}$ gr. doses of the nitrate, given hypodermically. One dose per day was sufficient. Profuse sweating was brought about, and in five days the patient was entirely rid of his rheumatism, which, moreover, did not return.

SUBSIDIZED MEDICAL EDUCATION IN TORONTO.

To the Editor of the CANADA LANCET:

Extracts from a Report recently presented to the Members of the Senate of the University of Toronto:

SIR,—Will you allow me space in your valuable columns, sufficient to call the attention of the medical profession to some facts which have recently been brought out? The following extracts speak for themselves :—

"Your Committee find that during these years (1887 to 1892), the Medical Faculty fund received credit from the University for fees paid by medical students for instruction in chemistry, biology and phisiology, to an amount exceeding $25,000, and that it was the credit of this sum, earned by members of the Arts Faculty, which produced the accumulation of the Medical Faculty surplus fund of $8,152. Had these fees gone, as under the re-organization the analogous fees now do, into the general funds of the University, not only would there have been no Medical Faculty surplus fund, but the medical members of the former Faculty would have received about $17,000 less than they actually did during the five years of their service.

"It may be added that your Committee learn that during the negotiations with the Government, which culminated with the re-organization, it was suggested by members of the Government that this surplus should be credited back to the University. But on the representation that the financial success of the new scheme of re-organization would require the application of this sum as a reserve fund to meet the initial financial strain, and that it would be prudently used for that purpose, so as to give the new system a fair start and put it on a good footing, the retention for this purpose of this surplus was agreed to.

"In 1892, by the scheme of re-organization, the surplus fund of $8,152 was appropriated for the use of the present Faculty, subject to the payment of $3,375 as retiring allowances. Since then the Faculty has expended large sums, partly on equipment, and partly on account of debts left unpaid by the old Faculty; so that, including $900 to be paid this year to Drs. Thorburn and

Wright, the account for such charges stands thus :—

"Retiring allowances and other charges connected with old Faculty.....$4,295 00
"Paid for equipment... ..... 4,256 00

$8,561 00

"(Signed) J. Loudon,
"*Chairman.*

"September 28th, 1894."

The above extracts, from a recent official document, confirm the charges made two or more years ago in the papers, that the Toronto University Medical Faculty had for some years been largely subsidized by the Arts Department of the University. At that time this charge was loudly denied. Now, however, the University authorities themselves admit more than was alleged.

Why after the re-organization of 1892 was this subsidizing policy still maintained so as to permit the Toronto University Faculty to pay for equipment, in the years 1892 to 1894, the sum of $4,266, as stated in this report? And this was done *after* the repeated pledges and promises of the Government that no money that the Medical Faculty did not earn would be spent for medical educational purposes!!! Queen's Medical College, Trinity Medical College, and the College in London, have received no such public aid.

British Fair Play.

Hydrastinin in Uterine Hæmorrhage.—Dr. Kallmorgen, *Jour. de Med. de Paris*, of the Woman's Polyclinic in Berlin, has just published a report of eighty-six cases of uterine hæmorrhage of diverse origin, treated with hydrastinin. This report affords much needed information in regard to the *permanent* effects of this remedy. Dr. Kallmorgen administered hydrastinin in pills made according to the following formula :

℞—Hydrastinin . . . . . gm. 1.
Make into thirty pills.

These pills were generally borne well, though in a few cases they excited slight gastric irritation, and in others painful uterine contraction. Their hæmostatic action varied according to the cause of hæmorrhage. In five cases of hæmorrhage due to retro-uterine hæmatocele, the flow was almost immediately arrested. In 25 cases of functional menorrhagia, the amount and duration of hæmorrhage were reduced to normal conditions, and the dysmenorrhœa, which complicated many of these cases, was partially or entirely relieved. Hydrastinin should be administered in functional menorrhagia a day or two before menstruation appears, and while it continues. Begin with two pills a day, and increase the number to three. Hydrastinin relieved fifteen out of eighteen cases of hæmorrhage following abortion, and three out of four cases due to lesions of the adnexa. Its effects were much less favorable in hæmorrhage produced by chronic endometritis, as it positively benefited only fifty-five per cent. of these cases. In beginning abortion, it was successful in thirty-seven per cent., and in uterine fibroids its hæmostatic action was apparent in only twenty-five per cent. of the cases treated. In hæmorrhage caused by cancer of the uterus, hydrastinin produced no effect whatever.

Hydrocyanate of Iron in Epilepsy.—Dr. F. C. Wiser, in a short article in the *Journal of Mat. Med.* gives the result of treatment of two cases of epilepsy with hydrocyanate of iron. Case number one had his arm amputated for traumatism, and for twenty-three years had had epileptic attacks increasing in frequency and severity till he averaged one a week and sometimes three or four seizures in one day The old stump was removed, but the attacks continued. Bromides had been used for a long time with apparently no avail. He was put upon ½ grain doses of the iron three times a day in May, 1893. From that time to the present, September, 1894, he has had but one attack, and that on the day following the first exhibition of the iron. In case number two, the patient was 32 years old, married, had children. Had suffered from epilepsy since childhood, attacks coming from two or three a week to one in two months. Bromides were used without any improvement in the patient's condition. In May, 1893, the same treatment as employed in case number one, was adopted, with the result that after the first month's treatment the attacks grew less frequent, so that only one seizure occurred in the four months following. Treatment was continued till December, 1893, the dose being gradually diminished. This patient has not had an attack since July, 1893. The Dr. reports several other cases now under his care, and all improving.

Dr. Robert T. Edes, of Boston, suggests a form of palatable and digestive milk in a communication to the *Medical Record; Coll. and Clin. Rec.* He says:

I have never seen it mentioned in any text-book, and it did not come to me from a professional source, but from a lady who had been for a long time the patient of the late Dr. Pease, of Syracuse, Whether it originated with him I cannot say, but perhaps some of your readers in Central New York, by whom he is doubtless as pleasantly remembered as by myself, can tell me. It is as follows: A pint of milk is gently warmed. Into it is dropped, very slowly and with constant stirring, about twenty minims of the dilute hydrochloric acid of the United States Pharmacopœia. The milk should be stirred until it cools. In this way a very fine, flocculent coagulum is produced, floating in the whey, which is easily accessible to the digestive secretions, while the whole fluid has lost somewhat of the flat and cloying taste which makes it unacceptable to so many. It will be noticed that milk prepared in this way differs from the various "wheys" in the highly important particular that the casein is retained and used, while it avoids the bitterness of pancreatized milk. I have found it occasionally of great value when other preparations have been unacceptable either to the palate or the stomach.

Renal Casts.—In a very interesting and practical paper in the *Inter. Med. Mag.*, Dr. A. E. Austin gives the clinical significance of the three great groups of casts. The hyaline and blood casts merely indicate irritation and hyperæmia. Closely associated with hyaline casts is amyloid change of the kidney, due usually to suppuration, and with a good prognosis if the source of suppuration be removed. Epithelial, granular and fibrinous casts indicate acute inflammation of the renal tubules, the epithelial cast pointing to the mild stage; that is, one of mere desquamation with urine slightly under normal in amount, specific gravity 1,030, high color, albumen a trace, numerous hyaline casts, free blood and renal epithelium. This may go on to brown or pale granular casts with diminution of the solids of the urine. The fatty and waxy casts, when numerous and persistent, indicate long-continued chronic inflammation of the kidney with bad prognosis. Blood and epithelial cells are absent. In this case the urine is diminished in amount with increased specific gravity. The pale, granular and small hyaline casts point to fibroid kidney. Aside from the microscopical appearance, the general condition of the patient, age, sex, and previous history must be taken into consideration. It should be remembered that the diagnosis of casts alone may mean little, but the kind of casts in abundance is the important point.

The Angel of Death is Fleet.—The *Glasgow Medical Journal* has the following antique legend, the moral of which is that Azrael had every facility at his disposal for the harvest of souls whenever the dread message was pronounced. According to the legend the ingenuity of man is wasted in trying to circumvent the grim pursuviant. The story is of King Solomon, who figures largely in Oriental tradition outside of Hebraic lore. It is told of him that, walking one day in a great city, accompanied by a friend, an awesome figure was perceived by them at the head of the street.

"Who is that?" inquired the friend in terror.

Solomon looked and answered: "It is the Angel of Death."

Then the friend begged of Solomon, who had the power of instantaneous transportation, to send him at once to some far off spot, and Solomon despatched him in a moment to India, thousands of miles away.

The Angel of Death meanwhile approached Solomon and asked: "Who was that man with whom you were just talking?"

Solomon gave the name, and the Angel of Death said: "Strange that he should have been here, for I am ordered to call for him to-night in India!"

Perchloride of Mercury in Whooping-Cough.—Raubitschek, *Therap. Monatsh.*, knowing the want of success attending the usual treatment of whooping-cough, determined in the case of his own three children to resort to a novel procedure. He thoroughly saturated a cotton-wool tampon with a 0.1 per cent. solution of perchloride of mercury, introduced it into the mouth, pressed it against the base of the tongue, thus allowing the fluid to trickle downwards

over the epiglottis, and finally withdrew it, at the same time swabbing the tonsils, uvula, and soft palate. This procedure was carried out daily, or every other day, according to the severity of the case, and was attended with the best results, not only in the three cases referred to, but also in 14 other children since similarly treated. An improvement was noticeable on the second or third day, and all the patients were either cured or relieved within eight to fourteen days. One case appeared to be arrested during development by five applications of the solution. The author considers any poisonous effects to be impossible.

AN EARLY GRAVE COMPLICATION OF PHARYNGEAL DIPHTHERIA. — Aufrecht, *Therapeutische Monatshefte*, calls attention to a particular form of diphtheria of the pharynx, which, despite its limited local extension, rapidly kills the patient in two or three days. It has been held that these almost foudroyant cases were to be attributed to a grave infectious myocarditis. Recently, however, the author has observed three cases of this kind where the autopsy showed no trace of myocarditis, but a sub-acute nephritis. The author, therefore, insists upon the importance of systematic examination of the urine from the beginning of diphtheria, even when no symptom points to a renal lesion. The symptoms observed in these cases have been very great frequency of pulse, a semi-comatose condition, delirium, high fever, and marked albuminuria. Guided by these cases the author has been able in a fourth case to combat this nephritis in the beginning by the administration of large quantities of alkaline and saline water (Wildungen) for the purpose of increasing diuresis and relieving the choked-up kidneys.

STRYCHNINE IN PULMONARY CONSUMPTION.—Dr. Thomas J. Mays, of Philadelphia, *Med. World*, in a paper read before the Pennsylvania State Medical Society, claims that, next to rest and food, strychnine in large doses is the most important agent in the treatment of pulmonary consumption. Begin with one thirty-second of a grain, and gradually increase to one-sixteenth, one-tenth or one-sixth of a grain, or even give it in larger doses, four times a day. According to the author, it does not produce albuminuria or diabetes, as is generally supposed. It alleviates the loss of appetite, the vomiting, the constipation, the nervousness and sleeplessness, the pain in the chest, the cough and expectoration, the dyspnœa, the weakness of the heart, and acts as a blood-builder in an eminent degree. Its usefulness rests on its influence over the nervous system, and is another link, the speaker said, in the chain of evidence, which shows that, in the great majority of cases, pulmonary consumption is the direct result of primary disease of the pulmonary nerve supply.

FOR BLEPHARITIS.—Millendorf recommends, *Coll. and Clin. Rec.*:

℞—Red oxide of mercury, . . . gr. x.
Vaseline, ... f ʒ ss.
SIG.—Apply to the edge of the lid at bedtime.

Or,

℞—Ammoniated mercury, . . . gr. xx.
Powdered camphor, ... gr. x.
Vaseline, ... f ʒ ss.
SIG.—Apply at night.

Or,

℞—Solution of subacetate of lead, . gtt. x.
Ointment of rose-water, . . ʒ iij.
SIG.—To be used for the more chronic forms of marginal blepharitis.

TREATMENT OF ULCERS OF THE LEG.—Frank, *Jour. of Amer. Med. Assoc.*, treats these cases as follows:—The granulations are thoroughly cleansed at first. Then they are treated with silver nitrate if the granulations are hypertrophic, or with iodoform if the surface is putrid, torpid and lacking in vitality. The leg is then washed and shaved, and a moderately thick layer of warm gelatine is applied to the ulcer with a brush. The gelatine is thus prepared:—

℞—Oxide of zinc	30	parts.
White gelatine	40	"
Glycerine	50	"
Water	90	"

A small patch of gauze is added as a covering and a gauze bandage from the toe upwards. If you want firm dressing, cover the bandage with another layer of gelatine, and continue the bandage from above downwards; let the gelatine cool and dry. If the discharge is abundant repeat the dressing every fourth day. If it is less, keep it on for eight days.

CAUTERIZING OVARIES INSTEAD OF REMOVING THEM.—Dr. Pozzi, of Hôpital Broca, *Therap. Gaz.*, has now practised cauterization of painful ovaries for over two years, and considers the plan very successful. In one case, in which he operated upon both ovaries, the woman has since given birth to a child. He performs his laparotomies in the ordinary recumbent position; draws the ovaries out of the abdominal opening. If the ovary is totally diseased, he removes it; but if a part is found to be healthy, he amputates the affected portion, cauterizes the stump, then sews the end with silk. If there are some small cysts, he opens them by touching with the Paquelin point. The ovary being returned to the abdomen, he examines and treats the other in a similar manner. Often as many as six small cysts are opened in this way in each ovary.

A NEW SYMPTOM OF CANCER.—G. Bogdan, *Br. Med. Jour.*, relates the case of a woman, aged forty-eight, who suffered from cancer of the stomach. The disease had gone through a long period of latency. The patient presented on each cheek a patch of wine-red discoloration formed by the dilatation of the superficial venules; the stain showed out sharply against the pale yellow of the surrounding skin. On the strength of this symptom alone Bogdan was able to make a diagnosis of probable cancer at a time when there was yet no other manifest sign of that affection. He looks upon such superficial varicosities on the cheeks as a valuable help to the early recognition of certain cancers; he has seen it in about two thirds of the cases of cancer which have come under his observation. He says it is particularly frequent in cases of epithelioma of the stomach and uterus, but less common in malignant disease of other organs.

MENTHOL IN DIPHTHERIA.—F. Kastorsky, *Br. Med. Jour.*, reports thirty-seven cases of diphtheria (in three adults and thirty-four children) treated and cured by painting with a ten per cent. alcoholic solution of menthol. The paintings (by means of a piece of cotton wool) were usually carried out three times daily. In some cases, however, a single free application was followed by complete disappearance of false membranes within two days. A marked improvement in the patient's general condition was invariably noticed from the beginning of the treatment. The same simple method was successfully practised by the author in numerous cases of anginas of various forms, and by Trütovsky in a group of cases of scarlatinal diphtheria.

SINGULTUS.—In a paper published in the *Physician and Surgeon*, Dr. D. L. Parker reports four cases of persistent singultus and the treatment employed. In each of the cases all the usual and known remedies had been tried without avail. In each case also, although the hiccoughing had gone on to the point of exhaustion of the patient, relief was at once obtained by dry cupping the abdomen, in two cases by ordinary drinking glasses, in the others by a cupping outfit. The author thinks, though we cannot see it as he does, that "the *modus operandi* of this remedy seems to be that by drawing forward a portion of the abdominal wall and thereby tending to enlarge the abdominal cavity, enough force is exerted upon the upper side of the diaphram, by atmospheric pressure, to overcome its spasmodic action."

CHEST PAINS.—Chest pains usually cause great discomfort to a patient, and are not sufficiently appreciated by the physician. Dr. J. K. Crook relates a series of causes in the *American Medico-Surgical Bulletin*, as illustrating the diagnostic value of chest pains. In some cases these pains are reflected from an overloaded or disordered stomach, in some cases it is neuralgia, and in exceptional cases the lungs themselves are at fault. Most persons with pains in the chest think they have some lung or heart disease. Pneumonia causes pain, but the other symptoms make the diagnosis clear. Consumption is not a disease accompanied by pain, and when it does occur it is from continual coughing.

THE STANDARD DICTIONARY.—By actual count the Standard Dictionary contains, exclusive of the Appendix, 301,865 vocabulary words and phrases, and the Appendix of proper names, foreign phrases, etc., contains 47,468 entries, making the total vocabulary of the Dictionary 349,333—this after great care has been exercised to exclude all useless words. The immense increase of the vocabulary of the English Language appears from

the fact that the vocabulary of Webster's International Dictionary is 125,000 and the Century Dictionary is 225,000.

Lactate of Strontium in Bright's Disease.—According to Dr. Ried, *Lancet*, the lactate of strontium, which is certainly an excellent diuretic, is beneficial in a large proportion of cases of Bright's disease, at all events when no sclerosis of the kidney has commenced. It should not be given in powder, as it is liable to provoke sickness; but when dissolved in the proportion of one to six parts of water, three or four tablespoonfuls can be taken per diem without unpleasant effects. Its diuretic action has induced Dr. Ried to believe that the lactate of strontium may be advantageously used instead of salicylates in the treatment of pleuritic effusions.

Latest Quotations in the Diploma Market.—A London correspondent says the trade in bogus American academic degrees, which Labouchere broke up by his exposures in London *Truth*, is again booming. "England is a peculiarly rich field for this sort of swindle, for John Bull's pet weakness is his ambition to write a long string of letters after his name. The latest quotations for degrees from the bogus American University are M.D., or LL.D., $150; any other degree, $125."

For Amenorrhœa.—The following (*Pract.*) promises well:—

℞.—Hydrargyri chloridi corrosivi, . . gr. ¾
Sodii arseniatis, ... gr. j.
Ferri sulphatis exsiccatæ, . . . gr. xxx.
Potassii carbonatis, ... gr. xv.
Extracti nucis vomicæ, . . . gr. v.—M.
Divid. in pil. xxx.

Sig.—One pill to be taken before each meal.

Chordee.—In a paper on "Local Anæsthesia," Dr. Wm. P. Carr, of Washington, D. C., writes, *Med. Bulletin*: "In this connection I may mention a fact well worth knowing, and I think not generally known, the chordee may be entirely and promptly relieved by putting on a condom containing two or three drachms of a two per cent. solution of carbolic acid, and that any pain in the penile portion of the urethra or pendulous penis may be controlled in this way."

Books and Pamphlets.

The Care and Feeding of Children, a Catechism for the use of Mothers and Nurses. By Emmet Holt, M.D. New York: D. Appleton & Co. 1894. Pp. 66. 50c.

A useful little book containing much valuable information in a small compass. The name of the author is a sufficient guarantee as to the quality of the information found in it. We commend it to all nurses both in and out of training, and to mothers having charge of their own infants.

Bread from Stones. A new and rational system of land fertilization and physical regeneration. Translated from the German writings of Julius Hensel. Philadelphia: A. J. Tafel. 1894.

The author's idea is that much that is now used as manure is useless, and goes back to the primeval rocks for the source of the supply of new material which is to regenerate the soil that has been exhausted by constant tillage. The work is interesting to all engaged in agriculture.

A Manual of Human Physiology. By Joseph H. Raymond, A.M.M.D., Professor of Physiology and Hygiene, Long Island Hospital, etc., with 102 illustrations and 4 full page colored plates. Philadelphia: W. B. Saunders. 1894.

The work is intended for students, and gives the main facts of the science; such as are necessary to be known if a sound method of treating disease is to be possible, leaving the more abstruse and recondite parts of the subject for future study by those whose inclination leads them in that direction. The idea is that of a practical teacher, and is, we think, well worked out in this book. He avoids what is "the impossible" during a student's life, and deals with the possible and practical.

Essentials of Diseases of the Ear; Arranged in the form of questions and answers. By E. B. Gleason, S.B.M.D., Clinical Professor of Otology Medico-Chirurgical College, Philadelphia, etc. Philadelphia: W. B. Saunders. 1894.

This is the latest of Saunders' Question Compends. It was written mainly for physicians who wish to take a post-graduate course in otology, to enable them, with the smallest amount of reading possible, to obtain a rudimentary knowledge of the essentials of the science, and thus to appreciate what is seen and heard in the actual work of an ear dispensary. It will supplement the lectures which undergraduates receive on the subject, and will be, we think, of great use to students for this purpose.

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PUERPERAL PHENOMENA OF INFLUENZA.

BY ADAM H. WRIGHT, B.A., M.D., M.R.C.S., ENG.

Professor of Obstetrics, Toronto University Medical Faculty.

Pregnancy and puerpery confer no immunity from influenza, nor, on the other hand, do they furnish any predisposition towards it. The pregnant and lying-in contract it perhaps less frequently than men, but quite as readily as other women, and no more so. The severity of their attacks of uncomplicated influenza in a general way calls for no special comment, as it differs but little from that accompanying the course of the disease in others.

In some instances in my own experience pregnant patients have appeared to suffer less from nervous and muscular prostration than others. It may be that the physiological hypertrophy of the heart during pregnancy prevents, to some extent, the profound prostration which is so frequently produced by the disease. The aged, the very young, and the weak, frequently succumb to the intensity of the fever, and the rapidly developed depression. From an obstetrical point of view we can, of course, exclude two classes—the aged and very young. As to the weak it unfortunately happens that a few delicate creatures, weakened by phthisis, or anæmia, or some other serious condition, become pregnant; and, for such, the advent of influenza is a sad calamity, which somewhat frequently results in death. However, women are generally healthy (as we understand the term) during the child-bearing period. At least I shall presume that such is the case in my consideration of the subject.

Pregnancy.—Influenza may induce abortion or premature birth, especially in severe cases with high temperature and great prostration. The danger is still greater when complications arise, especially those pertaining to the thoracic organs. A severe gastro-intestinal catarrh, though not one of the most common, is certainly one of the most serious, complications, and frequently terminates the pregnancy. What are the causes of the abortion or premature labor?

1. Death of the fœtus. (a) From high temperature alone — what H. C. Wood calls "heat stroke."—A materual temperature of 104° F. always imperils fœtal life. A rapid rise to 106.5° will almost certainly destroy it. The fœtus has its own heat producing apparatus, and certain experiments made in face and breech presentations (when one thermometer was placed in the mouth or anus of the fœtus, and the other in the vagina of the parturient woman) indicate that in normal cases the temperature of the unborn child is slightly higher than that of the mother. In diseased conditions the difference may be greater, but we have not sufficient evidence to speak with any certainty. (b) From intra-uterine influenza (?) (c) From asphyxia, when the blood pressure of the mother is materially lowered, especially in those cases where profound depression continues for some time after acute symptoms have disappeared.

2. Hæmorrhagic endometritis. Premature and profuse menstruation in young girls, and menorrhagia and metrorrhagia in non-pregnant women are not uncommon as a result of this condition (endometritis) which is produced by the influenza. A similar inflammation of the endometrium during pregnancy, I have no doubt, sometimes produces abortion.

3. Irritation of the muscular tissue of the uterus from high temperature, or the poisoned condition of the maternal blood. One or other of these factors, or both combined, may produce an irritation of the musculature which will cause the expulsion of the uterine contents independently of the condition of the embryo, or fœtus.

I think that the most common cause of abortion induced by influenza is the death of the fœtus; and, at the same time, I think the most common cause of the death of the fœtus is the high maternal temperature. If my view be correct it is probable that the influenza acts like other infectious diseases, especially typhoid fever. I believe, however, that uncomplicated influenza induces

abortion or premature labor in a smaller proportion of cases than any of the other infectious diseases.

Labor.— Influenza during labor is a serious complication, although, perhaps, not so much so as many think. The chief dangers are :

1. Weakening of the expulsive powers of the uterine and abdominal walls.
2. Hæmorrhage during the third stage.
3. Post-partum hæmorrhage.

Ballantyne, of Edinburgh, refers to these dangers, but intimates that serious hæmorrhages are not common. He, in fact, expresses an opinion that in the majority of cases uncomplicated influenza simply delays labor and necessitates a frequent use of the forceps. While I agree with him I think that generally the loss of blood is abnormally large, and the recovery is frequently protracted and unsatisfactory.

Puerperium.—During the puerperal period influenza causes much distress, and great prostration, but rarely produces fatal results. I think, indeed, that in a large proportion of such cases the recovery is fairly rapid, and satisfactory ; and, generally, the infant suffers but little. Any complication, however, at such a time is extremely unfortunate. As a rule the uncomplicated disease does not interfere materially with lactation. In some cases it is well to supplement the temporary deficiency of mother's milk with artificial feeding for a time, but it is rarely necessary to resort entirely to the administration of artificial foods.

I have gone over the records of the Burnside Lying-in Hospital, of Toronto, during the epidemics of la-grippe, and have made out the following tabulated statement :

BURNSIDE LYING-IN HOSPITAL, TORONTO.

THREE EPIDEMICS OF INFLUENZA.

	Normal Temp., i.e. never over 100° F.	Abnormal Temp. i.e. at some time over 100° F. Causes various —slight.	Influenza.	Surgical Septicæmia.	Total.
1890—3 months.....	27	8	8	1 (?)	44
1892—6 weeks.....	16	..	1	..	17
1893—9 weeks.....	17	..	10	1 died 1 (?)	29
	60	8	19	3	90

From this it will be seen that, during the most severe epidemic in January, February and March of 1890, forty-four women were delivered. Of these, eight had influenza, and one had a mild surgical septicæmia. Of the eight cases of influenza, all made uneventful recoveries. During the second epidemic the results were remarkably good. With the exception of one slight influenza all the patients made normal recoveries. In the third epidemic, out of twenty-nine delivered, ten had influenza, but made good recoveries. One patient with somewhat serious symptoms for a few days recovered. One patient died from puerperal septicæmia in four days after delivery. It would be a great comfort to me if I could think that influenza was in any degree a cause of this death ; but, unfortunately, I could find no evidence in that direction.

In all three epidemics there were ninety deliveries, with nineteen cases of influenza attacking the patients at various stages of the puerperium—from the third to the fourteen day. The attacks lasted from two to five days ; and I must say I was much surprised to see such simple and complete recoveries in all the cases. In the two doubtful cases I think one was a septicæmia with influenza superadded, and the other a septicæmia from ordinary surgical causes. Both, however, made fairly good and rapid recoveries.

Prognosis.—The prospects of complete recovery, under all the circumstances to which I have referred, are good under proper treatment from the commencement of the attack. During pregnancy the patient runs the ordinary risks as to complications, and the dangers of such complications, especially pulmonary, are greater than in the non-pregnant state. The danger of abortion exists in some degree in all cases, but is especially great in the presence of complications. Fortunately pregnant women take much better care of themselves, partly on account of the maternal instinct, which, while it has to some extent influenced them since babyhood, is especially active during gestation ; and, on the other hand, they are better cared for by their friends who combine in their efforts to protect them from all ills, supposed and real, until they have passed through pregnancy, labor, and the puerperal state. These factors combined form wonderful safeguards against the disasters which are produced by exposure and undue exertion during the ordinary course of the disease.

In labor I think influenza adds materially to the dangers of the patient, but rarely causes death. In certain cases, however, with complications or great weakness due to an influenza the dangers are of the gravest sort.

In the puerperal state the effects of influenza are neither serious nor lasting, as a rule, when the surrounding are favorable—or, in other words, when no septic matter is introduced into the system from outside.

During lactation, after the puerperal period has passed, the dangers are probably more serious than during gestation or the puerperal state. The debilitating effect of the disease, and the drain produced by a nursing baby sometimes lead to profound depression, both physical and mental. Again, a woman with a baby five months old is not as "interesting," and, perhaps as a consequence, is not as careful and as well cared for as a women who is going to have a baby in five months. Altogether I think, the dangers of influenza during labor and lactation are greater than during pregnancy and the puerperal period. But, under all these circumstances, I think the dangers may be greatly minimized, if not entirely prevented, by proper care and treatment.

Treatment.—Perfect rest in bed in a dry warm room with an even temperature of not less than 65° to 70° until the temperature is permanently reduced to normal. The influenza germ loves moisture and cold. Lie down with him in a dry and warm place; he will sicken and die. Go out and fight him in a damp and cold place; he will become vigorous and destructive. The longer you fight him the greater becomes his certainty of victory. In addition to rest, quiet and warmth, mild catharsis, and decidedly supporting treatment with stimulants in certain cases are very important. I won't try to convert any one in this Association who does not believe in alcohol as a stimulant, but I would like to say to those who have faith in the virtue of alcohol in influenza: give it judiciously but liberally. I know of no disease, in certain phases of which, the administration of alcohol in some form, especially whisky or brandy, does so much good. Don't, however, allow your patient to work hard, or expose herself in any way, with a hope that a glass of wine will make her all right. Among medicines I place opium first, with a hope that it will relieve pain at any time, and prevent abortion during pregnancy. The greatest danger to be dreaded is the termination of pregnancy. As a high temperature is liable to kill the fœtus, we should try to keep it down below 104°. Beware of antipyretics however. Antipyrine is especially dangerous, and, I think killed many people in the epidemic of 1890. Phenacetine may be used carefully, as probably the safest among the effective drugs of its class.

I cannot go into any more details, but would in addition advise tonics, taking care of the stomach, and only giving those which it is likely to absorb. Strychnine is perhaps the best, especially during the period of depression. Treat complications as they arise, having these points in view; but remember, that if your patients have perfect rest in bed in a dry and warm place from the commencement of the attack, there will be no complications. There may be exceptions to this rule, but they are very few.

ACTION OF THE HYDROCHLORATE OF SCOPOLAMINE ON THE EYE.*

BY THOMAS R. POOLEY, M.D.

Permanent Member of the Medical Society of the State of New York; Surgeon-in-Chief of the New Amsterdam Eye and Ear Hospital; Professor of Ophthalmology in the New York Polyclinic.

It is the purpose of this paper to briefly summarize some of the observations already published in relation to this drug, and then to give the writer's experience with the same for the past six months.

In the *Klinische Monatsblätter für Augenheilkunde für* 1893, Rhalemann has a paper in which he says that Schmidt, of Marburg, first described this drug—an atropoid alkaloid derived from the roots of *scopolia atropoides*, and which, like atropine, hyoscine, etc., belongs to the pharmacological group of the tropeines, and as such the installation of a watery solution in the eye causes dilatation of the pupil. According to Landenburg, scopolamine as well as hyoscine are contained in hyoscyamus without being identical with the latter. It is rather isomeric with cocaine, and yields quite different integral products.

*Read before the New York State Medical Society, February 7th, 1894.

The preparation was given to Rhalemann by Professor Kobert, with the information that after experiments on the lower animals by the internal administration of scopolamine, it showed an opposite effect to atropine, and that its influence on the cortex of the brain was not stimulating, like that of atropine, but on the contrary retarded its action. (Later on I shall have some comment to make on the erroneous character of these observations.) These last-named qualities led to the expectation *a priori* that the local special effects of the new remedy would be different, especially on the conjunctival blood vessels. Rhalemann, after using scopolamine both on normal and diseased eyes, came to the conclusion that as a mydriatic and antiphologistic it surpasses all other tropeines, including atropine. In strength of mydriatic effect it resembles hyoscine closely. The remedy does not produce the disagreeable after-effects and double vision which, according to his observations, occur in the use of hyoscine; but it possesses all the advantages which belong to hyoscine in comparison with atropine. He used it during a period of six months in all cases in which atropine is applicable, and also by way of comparison with atropine, and he has found that scopolamine is in many cases at least, equal to atropine, while in others it is entirely its superior; but the circumstances, says he, which will insure scopolamine an enduring place among ophthalmic remedies is that it can be used for a longer time in a solution, equivalent to a one per cent. solution of atropine, without producing the troublesome associated symptoms which so often make the continued use of atropine impossible. He further says—but this I do not believe—it is well known that atropine when used as an instillation for any length of time, disturbs the appetite. He has never seen this or similar effects from the use of scopolamine. It is only after very large doses of scopolamine that a feeling of dryness of the throat is produced. The state of restless nervousness, with or without reddening of the face, and quick pulse, which is so often found in patients treated with atropine, never occurred after the use of scopolamine. In cases of incipient atropine poisoning, or in an idiosyncrasy toward atropine, scopolamine renders therefore the best service, since it more than supplants atropine in its local effect, and completely destroys its general effect.

In cases of iritis, episcleritis, with infiltration of the sclerotic, etc., when atropine could not be any longer endured, when the powers of the body were depressed on account of want of appetite, and the general condition of the body was as unfavorable as possible, scopolamine not only improved the eye disease, but also the general health. The remedy surpasses atropine in its influence on pericorneal injection, and possesses special advantages in suppurative keratitis, serpent ulcer, and irido-cyclitis. As is known, under these circumstances, especially in suppurative keratitis, serpent ulcer and irido-cyclitis, atropine is often inadvisable. But Rhalemann has found in five cases that scopolamine caused a diminution in the size of a hypopion. Scopolamine seems to act far more favorably on suppurating tissues than atropine, probably through its effect on the blood vessels. Scopolamine does not seem to increase intra-ocular pressure, even if there is a pathological increase of tension. If there is a pathological increase of tension the remedy can be borne; therefore it is an indispensable drug in inflammatory conditions, especially in iritis, when they occur in glaucomatous eyes. He has used scopolamine with advantage in several cases of chronic inflammation with secondary glaucoma. In one case of absolute glaucoma with great irritation, strong ciliary injection and hyphæmia, the pain ceased, the eye became quiet, and the blood disappeared from the anterior chamber under the influence of this drug. He has not tried it in acute glaucoma. Hydrochlorate of scopolamine acts five times as powerfully as atropine. It paralyzes, like the latter, and in the same degree, the sphincter of the iris, and the accommodation. The duration of the effect is one-fifth per cent. scopolamine compared with one per cent. atropine. (With homatropine or sulphate it is not stated.) The duration of the effect is about the same—perhaps somewhat shorter with scopolamine than with atropine. It is to be used in solutions of 1 to 2 *pro mille* ($\frac{1}{10}$ to $\frac{1}{5}$ per cent.), which solutions correspond in dose to $\frac{1}{2}$ and 1 per cent. solutions of atropine. Six to seven drops may be used daily in an adult, or it may be used every fifteen minutes during one, or one and a-half hours. With children correspondingly weaker solutions are to be used. It operates best when used in divided doses.—(Report on Therapeutic Progress, *Therapeutic Gazette*;

extract from the *American Journal of Ophthalmology*, July 18, 1893.)

L. Ballarminow (*Russian Wratch*, No. 17, 1893,) abstract in the *Revue générale de l'ophthalmologie*, July, 1893, also has some observations on the action of scopolamine, from which he draws the following conclusions which are essentially the same as those entertained by Rhalemann: Scopolamine is indicated for the same causes as atropine, especially to determine the anomalies of refraction and accommodation, owing to its marked effect on accommodation, which permits of a speedy and accurate determination; in addition, it considerably shortens the period of duration of paralysis of accomodation and mydriasis. Scopolamine is also preferable to atropine in cases of short attacks of inflammation of the cornea. In general, scopolamine has all the good effects of atropine without its bad qualities. The author therefore thinks that scopolamine will soon replace atropine in the practice of ophthalmology. Merck (The Market Report for 1893) describes scopolamine hydrobromate as a salt of the alkaloid from *scopolia atropoides*, similar in physiological action and use to atropine, but not causing dryness of the throat, nervous restlessness or congestion of the face as in the case of atropine; neither does it affect intra-ocular pressure. Its application as a mydriatic is in $\frac{1}{10}$ to $\frac{1}{5}$ per cent. solution, which correspond to $\frac{1}{2}$ to 1 per cent. atropine solution.

It was shortly after reading these *couleur de rose* reports of the virtues of the new drug (August, 1893) that I began its occasional use—at first to determine whether it had any local anæsthetic properties, which I soon found it did not possess. I then began its use in all such cases in which we usually employ atropine. The preparation I first used, a one-fifth per cent., was made by Merck, and obtained from Fraser's. In all cases where instillations were used by myself, or my assistant, Dr. W. J. Killen, this preparation was employed, but when it was prescribed the patients got it at Weiss' drug store, Thirty-Fourth Street and Seventh Avenue, which was also stated to have been Merck's preparation.

As a mydriatic to determine the anomalies of refraction, my house surgeon has used it in a number of cases which I will not weary the Society by reporting in detail, but I will briefly give the results. In some instances the instillations were made while the patient was in the hospital—four times within an hour, or at intervals of fifteen minutes—and then the examination was proceeded with. In every instance it was found that the effect had been to produce complete paralysis of accommodation, and that mydriasis was produced in from ten to fifteen minutes, but that it took about three to four instillations to complete the paralysis of accommodation. The completeness of the paralysis of accommodation was shown both by the inability to see in the near, and by the bringing out in the second examination the total amount of ametropia. The duration of the mydriasis and the paralysis of accommodation was from twenty-four to forty-eight hours—about the same as homatropine, but much shorter than that of sulphate of atropine. One remarkable result observed by Dr. Killen in several cases was a notable diminution in the visual acuteness after the full effect of the drug on accommodation—*i.e.*, the correction of the ametropia did not bring the vision to the normal standard.

In three cases, all of them occurring in patients who had bought the drug themselves and used it at home, very marked toxic effects occurred. One of them is so remarkable that I shall take the liberty to report it in full. It happened in a girl of about thirteen years, in whom there was a history of convalescence from nephritis following an attack of diphtheria and cardiac palpitation. These facts, however, did not come to light until after the drug had been used. On January, 29, 1894, she came to the clinic having used the solution of scopolamine (one-fifth per cent.) six times in each eye, when the most alarming symptoms set in—the child began to stagger, talk in a thick, drunken and foolish way, and at times seemed out of her head, and was very dizzy. At the clinic, the pupils were found to be widely dilated, there was constant working of the lips and muscles of the face; the pulse was very rapid—120 to 130 per minute—and the heart's action very irregular and rapid. She had a staggering gait which did not allow her to walk without assistance. She complained of needles under her feet on standing; she said there was dryness of the throat, and there was no erythema of the face. She was kept in the hospital for three hours before she was able to go home. She was given half an

ounce of brandy two or three times. Two day later the mother brought her back to have the examination of the eyes completed. She said that all that night the girl raved and was out of her head, and it was only two days after the use of the drug that she seemed to have fully recovered. Two other cases came under notice only a day or two later, both occurring in healthy adult females in whom the symptoms were the same, but less in degree. In addition, both of these complained of dryness of the fauces. Here, too, the toxic symptoms did not pass off before twenty-four hours in one case, and in the other, forty-eight hours. In all of these cases, as the drug was given to be used at home, and a larger quantity prescribed than was needed, more than one drop may have been used, and it may even have run over the face into the mouth. At all events, it seemed significant that these symptoms occurred only when the drug was used by the patients themselves. The number of instillations, too, were more than were used at the clinic.

The other cases in which I have used this drug have been mostly in ulcers of the cornea of different types. In one case of serpent ulcer, just the kind in which it is said to be so efficacious, it was noted that scopolamine was used for two days, but the eye was so irritated by it that atropine had to be substituted. In all other affections of the cornea in which it was used, there was a very beneficial effect noted, especially so in one case of suppurative keratitis of traumatic origin, in which the healing occurred in a few days. In quite a number of cases of phlyctenular keratitis, too, it acted very promptly. In one case of keratoiritis, the mydriatic effect of the drug was very quick, marked and satisfactory. I have not yet tried it in cases of iritis of severe type, or in any case in which there was a tendency to increase in intra-ocular tension, and, consequently, cannot confirm or deny the very important observation made by the authors quoted, that it does not increase intra-ocular tension. If this shall be confirmed, however, by future experience and observation, we shall have a drug of inestimable value in ocular therapeutics. I am anxious, too, to try it in cases in which atropine produces the severe form of conjunctivitis which we call "atropine poisoning," for, from the positive statements made, we may hope that it will not only supersede atropine in these cases, but will also have a favorable effect on its cure when it has already occurred.

My conclusions, then, from my brief trial of scopolamine are: That it is of value as a mydriatic and cycloplegic in the examination of anomalies of refraction; that its action is more complete than homatropine and of about the same duration, and better than sulphate of atropine because its effects pass off sooner; that it is open to the objection, if my observation should be confirmed by wider experience, that it produces toxic effects oftener than homatropine in spite of statements to the contrary; that the temporary amblyopia sometimes induced does not seem to be of much moment; that in cases of short attacks of inflammation of the cornea, especially in some of the suppurative type, it is of special value.

The tendency of the profession to vaunt the therapeutic value of a new drug is well known, and many instances in which those who were loudest in their praises of it soon become equally pronounced in their condemnation, must occur to all of us. That scopolamine, as we have quoted from one of the authors, will soon replace atropine in the practice of ophthalmology is not so well assured, but that it may prove a very valuable addition to the list of mydriatics which we now have, seems to be altogether likely, and we await with interest further details of experience and observation from our colleagues.

SEVERE BRAIN INJURY, WITH RECOVERY.

BY A. N. HOTSON, M.D., INNERKIP, ONT.

On Sept. 30th, '93, at 6.30 p.m., C. P., a farmer, æt. 22, healthy, had never used tobacco nor alcohol, was kicked by a colt on the right temple, crushing in the skull, tearing the membranes and scattering the brain matter about. Ten minutes later I saw the case and had him carried into the house. He was unconscious, respirations scarcely perceptible, accompanied about every half minute by a deeper respiration, pulse very slow and feeble, extremities cold, pupils natural size but fixed.

Wound in scalp was shape of hoof—1½ inches by 2½ inches—the long diameter being nearly vertical. Cleansed the wound, removing a num-

ber of pieces of bone, one piece being half an inch square. The two largest pieces still remained, and finding that it would require some force to remove them, and fearing complete collapse, I dressed the wound and waited for reaction. Lost considerable blood. Reaction began at 2 a.m., Oct. 1st, and at 11 a.m., with Dr. McLurg, removed the remaining two pieces of bone, which measured 1 inch by 1¼ inches and ½ inch by 1 inch. The larger, an irregular square, was the anterior inferior angle of the parietal bone. The smaller, triangular in shape, was that portion of the great wing of the sphenoid which lies between the frontal bone and the squamous portion of the temporal.

The squamous also suffered, so that the opening in the skull was 2 inches vertically and 1¼ inches horizontally, and converged to an angle at the lower part. The membranes were torn in the anterior portion of the wound ⅝ of an inch and in the posterior portion ½ of an inch. Injured brain matter came away when he was kicked and lay on the ground beside him, while I was cleansing the wound, and also when we removed the largest piece of bone; in all estimated at 3 or 4 ounces. I believe this estimate is under the actual amount. Branches of the middle meningeal artery were ruptured, and it was with considerable difficuly that we succeeded in arresting the hæmorrhage sufficiently to dress the wound. Used hot water. Dressed wound with iodoform and bichloride gauze. Pupils reacted to light. Temp. normal, pulse 56 and weak. Semi-consciousness. P.m., gave calomel grs. vj. and pulv. jalap co. grs. x.

Oct. 2, a.m. Bandages were soaked with blood. Re-dressed; repeated the calomel and jalap. In the afternoon, gave tablespoonful doses of a saturated solution of magnesia sulph. every half hour. Still there was no motion of the bowels, and at 10 p.m. gave an enema of castor oil ℥j., mag. sulph. ℥j., water Oij.

Oct. 3rd. At 2 a.m. bowels operated freely. More conscious. At 4 a.m. had a convulsion. They recurred about fifteen times before 10 a.m. on the 4th. The convulsions were mild, affecting principally the muscles of the upper lip and angle of the mouth on the right side. The centre for these muscles is supposed to be in the lower part of the ascending frontal and ascending parietal convolutions, and acting on this suggestion, I probed deeply in the upper and posterior part of the wound, and had the satisfaction of dislodging some pus and blood-clots. While doing this and washing out the cavity, he had his last convulsion. On 4th, temp. 101.5°; on 5th, 100.5°; on 6th, 99°, and normal on 7th; on 9th, 100°; on 10th, normal; pulse 80 and strong, good appetite, quite conscious and rational, wound healing rapidly. Patient continued to improve, not having a single bad symptom, until the 20th, on which date, a.m., temp. was 101°; p.m., 104.2°.

Discovered that patient had been fed on the 19th, pork, potatoes and pastry. Vomited severely. Gave antipyretics, put icebag to head. Wound bled freely on 21st. Had bowels cleaned out. The new tissue broke down. Brain inclined to hernia, temp. 103°. On 25th, hernia could not be reduced without considerable force. At 2 p.m., with Dr. McLurg, reduced the hernia and cut away all the broken down tissue, and used wedge-shaped compress to keep hernia reduced. A little brain matter came away. Quinia was suggested, but had no effect on the temperature; got last dose of quinia at 9 a.m. on 27th. Temp. still 103°.

28th, a.m. Found patient in a state out of which he could not be roused; gave utterance to no articulations; would look about, but give no sign or recognition; passed water in bed; joints quite stiff, made no effort to speak, groaned at times; pupils slightly dilated, but would respond to light; carotids did not throb particularly. Temp. 103°. Brain very much inclined to hernia. 25th, temp. 101.5°. No evidence of returning consciousness.

30th. At 2 a.m., broke into a profuse sweat, which continued for six hours. Very weak, pulse 130 and irregular, temp. 99.8°. Consciousness returning. Brain not so much inclined to hernia.

From this time the patient continued to improve; the wound granulated and healed, except a small opening which still discharges a little thin watery pus. Several small pieces of bone separated and came away. On Nov. 27th, sat up, and on Dec. 2nd walked about in the house.

The patient is quite rational and gives no evidence of lessened mental power. Has been on visits to several neighboring towns, and feels well and strong.

On Jan. 5th, '94, he was suddenly seized with a severe epileptic convulsion, and two hours later had a second fit.

Put him on pot. brom. and chloral hyd., and he has had none since.

In conclusion, I will draw attention to a few facts and leave them with your readers to discuss. First, then, note the extensive injury to the brain substance, and at present (now six months), to all appearance, no impairment of the mental faculties. Subsequent events may possibly prove present appearances to be fallacious, but the chances are in favor of the patient. Then the amount of damage to the skull indicates great violence, but having withstood the shock, this was probably an advantage to the patient, for it gave excellent drainage.

Strong bands have formed across the opening, and in the lower angle there is the probability of some bone formation.

Again, the epileptic convulsions, that occurred on the 3rd and 4th of Oct., and which ceased on the removal of blood-clots and pus from the upper and posterior part of the wound, furnish strong evidence that the centre, controlling the muscles of the lips and angle of the mouth, is situated in that region.

It was unfortunate that the patient, contrary to instructions, was given such indigestible articles of food as pork and pastry; but what I wish to note is, that the patient became unconscious at a time when his circulation was steadier, stronger and slower than it had been for a week before, the pulse being 108. He lay almost motionless, but not from paralysis; there was considerable tendency of the brain to hernia, and concurrent with improvement was there a lessening of this tendency. The face was about the same color as before, the eyes were not congested, the pupils were slightly dilated, and the carotids did not throb particularly. There seemed to be increased intercranial pressure. A question that has risen in my mind is, whether or not the administration of antipyretics has any tendency to produce such a state; and, if so, which has the most and which the least tendency?

P.S.—Since the foregoing was written in April last, there have been changes in the case. In June he had two convulsions and on Aug. 27th he was again seized, and on 30th the fits recurred and continued to recur every ten to thirty minutes until the patient succumbed on the 31st, exactly eleven months after receiving the injury.

Gave pot. brom., chloral hyd., morphia and chloroform, and laid open the seat of injury down to the dura mater, but the convulsions continued. Patient did a man's work on the farm, blew a trombone in a brass band, and attended open-air dancing parties till all hours of the night. The week before his death he indulged in such pleasures six consecutive nights. No amount of persuasion could deter him from these extremes.

The lack of judgment and increased wilfulness were apparently the only evil effects on the mind.

Selected Articles.

PRESERVATION OF MORBID PRODUCTS FOR MICROSCOPICAL EXAMINATION.

The microscopical examination of diseased tissue, secretions, excretions and exudations, is now considered an indispensable aid to the formation of a correct diagnosis, a safe prognosis, and a rational therapy. That such examinations are not resorted to oftener than they are is certainly to be regretted. The general apathy in this matter is principally due to the fact that even the principles of *practical* pathology have not occupied the position in the curriculum of the medical colleges of this country that their importance demands. Consequently, their graduates are not able to make the examinations themselves, and, if they have specimens which they wish to send to a pathologist to be investigated, they do not know how to *preserve* them. The result is that very often the specimens are treated in such a way that a satisfactory examination cannot be made. It is not an uncommon occurrence to have morbid tissues and growths sent immersed in whisky, brandy, and even water. I once received a portion of a tumor wrapped in several layers of cloth and paper. It was several days before the package reached me. Its condition can be imagined. Suffice it to say, I did not examine it. Urine is frequently sent without anything being added to prevent decomposition. Sputum is often transmitted between the folds of a prescription blank or writing paper. Such methods may place the pathologist in an uncomfortable position, and he is often severely criticised as incompetent, when the fault belongs to another.

In view of these facts, I have thought it might be acceptable to many of the readers of the *Louisville Medical Monthly* to have such informa-

tion given them as is necessary to enable them to properly *preserve* and forward such morbid products as they would likely wish to send to a pathologist for microscopical examination.

For convenience of treatment, all morbid products can be classed under two heads—*solids* and *liquids*. The *requirement* is, that they must be preserved in such a way that their constituent elements shall not undergo any material alteration. To accomplish this end, we use certain agents which "fix" or "kill" these elements. There are a number of such agents, but, as I wish to make this paper as practical as possible, I will mention only those which are easily procured in any drug store. It is evident that both classes of morbid products can not be submitted to the same treatment. Therefore, we will consider the *solid* products first.

As "fixing" agents for this class I will mention:

A.—90% *Alcohol*, or the ordinary alcohol found in commerce.

B. *Absolute Alcohol.*—This is not found in commerce sufficiently anhydrous, so must be made at home. This is easily done by placing, say, one-half pound sulphate copper in an iron vessel; put it in the oven of a cook stove and bake it until it falls into a fine *white powder*. Then place the powder into a quart bottle and pour over it sufficient 90% alcohol to fill the bottle. Cork it with a ground-glass stopper, if one is at hand; if not, use a perfectly sound cork. Now and then shake the bottle well. In twenty-four, or better, forty-eight, hours, the alcohol will be ready for use, *after filtering*.

C.—*Müller's Fluid:*

R.—Potassium bichromate, .	2½ parts.
Sodium sulphate, . . .	1 part.
Water, ...	100 parts.—M.

D.—*Erlicki's Fluid:*

R.—Potassium bichromate, .	2½ parts.
Cupric sulphate, . . .	½ part.
Water, ...	100 parts.—M.

This is a better preservative than Müller's fluid.

E.—*Picric acid*—saturated aqueous solution.

It is not an easy matter to give definite directions as to which of these "fixing" or preservative solutions it is best to use in individual cases. However, the following rules will assist in determining the matter. Preserve in—

1st. *Alcohol* (90%).—Firm, hard tissues, and also such as do not owe their pathological condition to *vascularity* or *congestion*, in part or in whole.

2nd. *Müller's or Erlicki's Fluid.*—All soft, vascular or congested tissues. In one of these fluids *must* be placed the eye, brain, spinal cord, ganglia and delicate tissues of whatever kind.

3rd. *Absolute Alcohol.*—All tissues which are to be examined for micro-organisms.

4th. *Picric Acid Solution.*—Pieces of diseased bone. This medium is also valuable for soft tumors, epithelial and gland tissues and mesentery. The pieces should be small, and must not remain in the preservative longer than twenty-four or forty-eight hours, except bone.

General Directions.—With a *very sharp* knife cut the tissues into blocks never more than one inch square and one-half inch thick. It is better to have them one-half or three-quarters inch square and one-quarter inch thick, if they can be so cut, and give a surface fairly representing the morbid conditions present. Where you have organs or growths surrounded by a capsule, or where the skin is involved, the blocks must be taken so as to have the capsule or skin attached to one edge of the section. It is also necessary to have blocks taken from the periphery, centre and intermediate portion of organ or tumor. When the kidney is concerned, take a section that will include both the cortical and medullary regions. If the stomach, intestines or bladder is the seat of disease, they must be slit open and tacked to a block of wood with thread, having the mucous surface up. Never wash these organs out with water, but press out the contents with the fingers and place them in the preservative fluid.

Thin membranes, such as the omentum and mesentery, should be stretched across a block of wood and tacked with thread. Have at hand a wide-mouthed bottle with a perfectly sound cork, and one that will hold enough of the preservative fluid to be in proportion to the volume of tissue it is to contain as 20 to 1. *This is imperative.* If the volume of the blocks aggregate 60 cubic centimeters, there must be a quart of the preservative. Have also a fine needle threaded with cotton thread. As each block of tissue is cut run the thread through it, and have it long enough to suspend the tissue in the upper portion of the fluid and permit a card to be attached bearing the name of the organ and from what part it is cut; if it is a tumor, whether it is from the periphery, centre or intermediate portion, treat each piece in the same way. Finally, place a label upon the bottle, giving the name, age and sex of the patient; the name of the preservative fluid, and the date the specimens were placed in it.

It is now ready to be sent to the pathologist, but if it is likely to take more than a day for it to reach him, it is best to wait twenty-four hours and change the fluid before sending.

Liquid Morbid Products.—Under this class we have urine, sputum; contents of abscesses, cysts and the cavities of the body. None of these require any preservative except the *urine*.

Urine.—When a sample of urine is sent for chemical analysis, as well as microscopical, at

least four ounces should be sent, if possible. Take the sample from the mixed urine voided during the night; or, if the patient has retained his urine in the bladder all night, send what he passes first in the morning. Drop into this quantity of urine eight or ten drops of carbolic acid or a few crystals of thymol. This will prevent decomposition and any change in the organic formed elements it may contain. If only a microscopical examination is desired, obtain the urine as above directed and let it stand in a cool place, securely covered, until the sediment falls. It is well to add the carbolic acid or thymol to the urine before sedimentation. It takes about twenty-four hours for the sediment to fall. Then pour off *nearly* all the supernatant fluid, place the remainder together with the sediment into a clean bottle. Add a little thymol.

Sputum.—Place a clean, small, wide-mouthed bottle and its cork in boiling water for half an hour, and, without rinsing it out with cold water, cork it up and let it cool in the air. Send the sputum that is expectorated in the morning. Very little is necessary. Let the patient spit directly into the bottle.

Contents of Cysts, Abscesses, etc.—These may be prepared in the same way as sputum. Care should be taken to evacuate the abscess, cyst, or cavity under strict aseptic rules.

In every case the *name*, *age* and *sex* of the patient should be given, as well as the location of the diseased condition. Any other information bearing directly upon the diagnosis should accompany the material.

It might seem an omission not to speak of the bacteriological examination of the fauces for the germs of diphtheria, and the intestinal discharges for those of typhoid fever. In these cases it is best for the bacteriologist to make the examination, or, rather, procure the specimen, himself. The extra cost of his trip to the residence of the patient will not add much to the fee charged.

Where diphtheria is suspected, and the patient does live so far away that the specimen will not reach the examiner the same day it is procured, the attending physician can obtain a tube of blood-serum and directions to use it from the nearest bacteriologist.

Intestinal discharges may be inclosed in a bottle prepared in the same way as for sputum.

By faithfully following these directions the physician sending specimens may rely upon a prompt and satisfactory reply.—*Louisville Med. Jour.*

LONDON now claims to be the healtiest of the large cities, the death-rate being only 16.3 per thousand persons. The death-rate in other large cities are, Berlin, 18.2; Paris, 20.5; Vienna, 22.5; New York, 19.6.

BLOOD SERUM THERAPEUTICS.

A very recent communication on this interesting subject appeared in the *Berl. Kl. Wochenschrift*, from the pen of one of the most distinguished workers in it (Professor Bebring). Although too long for a letter, an abstract I have thought would be useful and interesting. The communication is arranged under 15 numbered heads, each of which contains a definite conclusion on some part of the subject. The Professor says:

1. Blood serum treatment is antitoxic treatment. By means of it we endeavor to combat such infectious diseases as we know are produced by parasitic poison. Besides the infectious diseases there are also poisonings with vegetable and animal poisons, for example, snake poisons that are accessible to blood serum treatment. The specific anti-toxines which represent the active principles of treatment by blood serum have hitherto only been found in the blood of immunised animals.

2. The specific blood antitoxins have hitherto only been prepared in such concentration, and in such quantities as to make them available in the treatment of human disease as regards one disease only, viz, diphtheria.

3. For the treatment of diphtheria of the human subject two different preparations are manufactured by the Hochst Farbwerken. The first (No. 1, price 5 marks) contains in 10 ccm. a single curative dose; the second, (No. 2, price 15 marks) contains in 11.5 ccm. two and a half doses. The simple curative doses contains rather more than 600 antitoxin normal units according to the Behring-Ehrlich calculation. The control experiments as regards the efficacy and innocuousness of the preparation issued by the above named works have been made by Messrs. Behring and Ehrlich themselves.

4. No. 1, or that containing blood serum 60 times the normal strength, is most recommended on account of the great difficulty in the way of preparing the remedy in greater strength.

5. The cheaper kind will answer well in the majority of cases, and it is only in the case of adults and in children under 10 years of age in whom the disease has lasted more than two or three days that the simple dose will be insufficient, in these cases the dose must be repeated.

6. Although he thinks therapeutic observation should be made known, he considers it inadvisable to record individual cases, whether for or against the treatment, but statistical results such as have been published by Prof. Heubner and Dr. A. Kossel are desirable.

7. For prophylatic purposes 60 normal units will, as a rule, suffice for either children or adults. A flask of ten ccm. therefore (of No. 1) will be

sufficient to protect ten individuals from diphtheria. But in regard to this it must be borne in mind that the degree of immunity conferred is in direct proportion to the number of antitoxin units injected.

8. Although no reaction has been observed following the injection of the antitoxin, it is not improbable that such may occur, and Dr. Libbertz, Gartnerweg, of Frankfort, a/Main, has expressed himself prepared to collect and publish any such cases that may come under notice.

9. It is specially deserving of notice, and the fact had been determined beyond the shadow of a doubt that the specific action of blood serum is more certain and rapid and effectual with a smaller number of units of antitoxin the earlier the treatment is begun. The judgment may, therefore, already be pronounced, that *of* 100 *cases that are treated within the first forty-eight hours of the commencement of the disease by the injection of a single dose of* 600 *units, not five cases will die of diphtheria.* The later treatment is begun the larger will be the dose required, and not only that, the prospect of recovery even with larger doses of the stronger medicine is much less, as here, as a rule, complications have now arisen over which the antitoxin serum has no control.

10. The antitoxin contained in the blood serum is a substance soluble in water, it is very resistant to the ordinary atmospheric influences, concerning which, however, we do not know much except that it renders the diphtheria poison harmless. Beyond this diphtheria antitoxin, even in the strongest concentrations in which it can be prepared, has no action whatever. Neither plant nor animal life can be affected in any way by antitoxin. The only reagent that acts on diphtheria antitoxin is the living organism infected by diphtheria and poisoned by it. Diphtheria antitoxin is for this reason in an eminent degree a specific.

11. Blood serum treatment is, therefore, specific treatment. Each blood antitoxin has a curative and protective action only in regard to a single morbid product.

12. As regards the origin of diphtheria antitoxin, as all other blood antoxins, we must regard as its source the reactionable albumen of the living body; the specific antitoxin arises from the reaction of the specific toxin on this albumen under such circumstances as point to a general disturbance of the regulatory appliances of the whole organism. The fever and other symptoms of disease that manifest themselves after a toxic infection we may look upon as an expression that the living organism is endeavoring by the aid of protective appliances provided by Nature to render harmless the disease poison that has gained entrance. In the natural course of things this endeavor is very often unsuccessful. In experiments on animals, however, we can arrange matters so that the natural curative powers gain the upper hand. The results of our immunzing labors are to be looked upon as a proof of this, that constantly larger doses of poison are rendered harmless by antitoxins.

13. When after such a spontaneous or arbitrarily produced infection we examine the juices of the body, we find that the toxin is not only compensated by the antitoxin, but we find an over-compensation, an excess of antitoxin. This excess of antitoxin is the reason why when it is wished to infect anew by a later introduction of toxin the dose has to be augumented. We can also make use of this excess in helping other individuals to overcome similar intoxication.

This is the basis of treatment by blood serum.

14. Bearing in mind that the antitoxins are chemical bodies soluble in water, it is not impossible that at some time they may be prepared synthetically, or, at least, outside the animal organism. The prospect of this is, however very slight, as is also that of procuring the antitoxin direct from the toxin, the prospect of procuring in the laboratory the antitoxin direct from the toxin is no better than that of procuring an alkali wherewith to neutralize an acid direct from the acid itself.

Division 15 is taken up with what he holds to be erroneous views as to directly and indirectly acting curative bodies, as when the diphtheria poison itself, when attenuated by physical or chemical agents, has been thought to have acted beneficially in diphtheria. The author has thought it might be so used in the diphtheritic paralysis, but he has seen it only do harm in simple acute diphtheria. Kleb's attempts to treat diphtheria in this way he considers to have completely failed.

VIRCHOW'S VIEW OF THE NEW TREATMENT OF DIPHTHERIA.

Virchow's opinion of the efficacy of the new treatment by blood serum of diphtheria may be thus summarized: The serum exercises a strong protective effect for weeks, perhaps even for three to four months; but it remains to be seen whether this effect is permanent, and whether—and this is the cardinal question—it is really possible to cure diphtheria by this remedy. Much, however, is gained if we succeed in protecting even one child in a family in which three or four are ill of this malady. And that we may accomplish this appears extremely probable.—German Corespondent, *Med. Press.*

TERPINE IN CHRONIC BRONCHITIS.—Dr. Delmis, *Gaz. des Hôp.*, has employed terpine in chronic bronchitis, bronchiectasis and emphysema, as well as in phthisis, with successful results. It is best given in a pill of ten cgms., three to ten a day.

VARICOSE ULCERS SUCCESSFULLY TREATED BY A NEW AND PAINLESS METHOD.

Mrs. B——, aged fifty-six. History of struma during childhood. Is the mother of two children. General health fair. Veins much dilated from knees down, with very poor cutaneous circulation. Has suffered from chronic ulcers for many years.

Was first seen by the author December 8, 1893; at that time she presented one or two ulcers that had not been healed for five years, and others of more recent date. The manner in which these ulcers appear is as follows: First, a macule which soon becomes papular, and later capped by a vesicle which soon ruptures, liberating a bloody serum. The mass continues to enlarge, forming an ulcer the size of a quarter of a dollar or even larger. During the formation and growth of this ulcer it is highly sensitive and constantly painful. At the time of my first visit, after cleansing the ulcers with a solution of soda bicarbonate, I applied a solution of methyl violet—care being taken to bring it in contact with the entire area of the base and margins. After allowing it to dry, each stained ulcer was covered by a small bit of absorbent cotton. Mechanical support was furnished by Martin's elastic bandage. This entire procedure was repeated every morning. On the second or third day it was evident that the healing process had begun.

At my first visit a new and very painful ulcer was forming on the left leg. This I treated for a few days with subnitrate of bismuth, boracic acid being tried and found too painful. No benefit was derived from either. Pain was constant; on the third or fourth day I painted it with methyl violet, and to my great surprise and the patient's comfort, the pain at once ceased.

After two or three daily applications the sensitiveness had so far subsided as to render bandaging of that part of the leg possible. All of the ulcers were thenceforth dressed daily. At the appearance of any new vesicle I applied methyl violet, which prevented further development. Internal treatment consisted of potassium iodide, grs. x. to xv. t.i.d.

The patient continued her duties as housekeeper, and at the end of six weeks only cicatrices remained to mark the site of her former ulcers.

An ideal solution, as used by Dr. M. F. Coomes, of Louisville, Ky., in the treatment of lupus, is made by using Merck's methyl violet, grs. v., aqua destillata, ʒ ij. This forms a harmless and entirely painless application. I would not hesitate to use it on any chronic ulcer.

The bandage has been worn most of the time, and to this date there has been no return of the ulcers.

To put at ease the mind of anyone who may think the internal treatment and bandage are deserving all the credit, I will state that both had been used, with the accepted local treatment, with but little success by other physicians, at intervals, for several years. Also ulcers that began forming under the bandage were invariably arrested in their course by methyl violet. Its action we believe to be germicidal and highly astringent.—Dr. Summers, in *Med. Rec.*

CHLORALOSE IN THE TREATMENT OF NIGHT SWEATS.

Night sweats and sleeplessness, as is well known, are among the more tormenting of the manifestations of chronic pulmonary disease. They are often associated, consequently it is an object to use a remedy capable of overcoming or modifying both of them at the same time. Such a remedy M. J. Sacaze thinks is to be found in chloralose. In an article on the subject published by him in the *Nouveau Montpellier médical* for October 6th, he refers to a previous communication of his relating to clinical facts observed in Professor Grasset's service. According to M. Sacaze's observations, in persons affected with an advanced stage of pulmonary consumption the insomnia and the night sweats have disappeared almost completely under the influence of chloralose, and in a few cases the improvement has continued after only a few doses of the remedy had been taken, although as a rule the symptoms have returned when the use of the drug was suspended. In a very small number of cases this action of the drug is very slight, and, indeed, in exceptional cases, far from inducing sleep, it produces excitement and worrying dreams. Exactly why there should be this difference in its action in these cases, the author says is unknown. At all events, it would be rash to conclude from the beneficial action of chloralose in the night sweats of chronic pulmonary disease that it would act also in cases of profuse perspiration due to nervous derangements or to the action of such sudorific drugs as pilocarpine, and perhaps it is because this has been expected of it that some writers, founding their opinions on its failure under such circumstances, have doubted its efficacy as an antihydrotic. We do not yet know, says M. Sacaze, whether chloralose controls profuse sweating by a direct action on the sweat glands, or whether it acts through the medium of the nervous centres, but he suggests the possibility that in pulmonary cases it may act by some modification of the phenomena of infection taking place within the lungs. As to this point, however, there are no experimental data on which to base a conclusion.

The author has experimented with chloralose in various diseases, but he has given his chief attention to its action in consumptives, in whom, with some rare exceptions, it has produced great improvement in regard to both the insomnia and the night sweats. In a number of cases of other chronic pulmonary diseases, however, such as chronic bronchitis, with dilatation of the bronchi and fœtid secretion, accompanied by profuse sweating, he has found the action of chloralose almost identical with that observed among consumptives, and it seems to have been this observation which led him to the surmise that the remedy might act by virtue of some modification of the infectious processes going on in the lungs.

With regard to the administration of chloralose, in order to avoid toxic effects, the author begins with the use of capsules, each containing three-quarters of a grain. One of these capsules is to be taken, and, if at the end of half an hour sleep has not been induced, another may be given, and two more, if necessary, at intervals of half an hour. When the insomnia is very obstinate the dose may be increased to a grain and a half, but not more than four such doses should be given in the course of a single night. Moreover, in such cases it is sometimes advisable to give capsules containing, each, three-quarters of a grain of chloralose and from two to three grains of sulphonal, and, if there are febrile movements toward evening, it is well to add a small quantity of quinine. The author has experimented largely with these combinations, and has observed good results from them. As chloralose is almost always given in small doses, he says, it has rarely given rise to accidents, and when these have occurred they have not been of a very serious nature. Moreover, the small size of the dose required admits of the continued use of the remedy for days together, according to the persistence of the symptoms that indicate its employment. Finally, M. Sacaze thinks that chloralose seems worthy to rank with atropine, ergot, and agaric in the treatment of the night sweats of consumptives, and all the more from the fact that it answers two indications at the same time, that of overcoming sleeplessness and of mitigating the sweating.—Ed. *N. Y. Med. Jour.*

MEDICAL NOTES.

Almost invariably, Professor Keen says, a *Cold Abscess* will be found to be tubercular in character.

Professor De Schweinitz says, in cases of *Corneal Ulcer* always search for the presence of a foreign body.

Professor Parvin thinks that the time at which *Impregnation* is most likely to occur is at the decline of menstruation.

The administration of quinine, Professor Hare says, should always be preceded by the administration of a *Cholagogue.*

One quarter of a drop of carbolic acid every hour for a few hours, Professor Keen says, will often stop vomiting coming on after etherization.

The period of incubation of *Syphilis*, according to Professor Horwitz, is from 10 to 98 days, but in most cases the disease makes its appearance in 21 days.

If a person's *Temperature* should be found to persist above 100° without any apparent cause, Professor Keen says tuberculosis should be suspected and sought for.

One per cent. of common baking soda put into the water in which instruments are boiled, in order *to sterilize them*, Professor Keen says, will, to a very great extent, if not totally, prevent rusting.

Professor Wilson says the *Tympany of Enteric Fever* often can be favorably influenced by repeated rectal injections of from five to six ounces of ice water, retained for some time in the bowel.

Professor Hare says *Aconite*, as far as is known, is the only drug which in poisonous doses will cause numbness of, and tickling of, the first of the mucous membranes with which it comes in contact, and then of the extremities.

Professor Parvin says that *Very Fat Women* will often be found not to menstruate, nor will they become pregnant, but if some of their adipose tissue be gotten rid of they will not only begin to menstruate, but will also be able to be impregnated.

Professor Parvin favors the use of an *Anæsthetic* in almost all cases of labor; and when the assistance of no one can be obtained who understands the administration of an anæsthetic, he favors the use of ether; otherwise he prefers chloroform.

Professor Keen says that if during the time that a patient is suffering from an attack of *Appendicitis* he experiences a sudden diffuse pain and presents the other evidences of shock, it is almost certain that an ulcer of the appendix, or abscess consequent upon the appendicitis has ruptured into the peritoneal cavity.—*Coll. and Clin. Rec.*

For Chronic Eczema of the Legs:

℞.—Unguenti Zinci, . .
Unguenti Hydrargyri,
Unguenti Plumbi Acetatis, ... Partes æquales.
Misce et fiat unguentum.

The Practitioner.

SOME SPECIAL THERAPEUTIC USES OF CANNABIS INDICA.—Cannabis indica, according to the author's opinion, is less frequently employed than it deserves. His experience has proved this medicament to be particularly efficient as an analgesic in combating pain associated with spasmodic phenomena; it seems to exert a favorable influence in all the forms of cephalalgia, the author alluding, in particular, to violent cephalalgia occasioned by cerebral tumors. He recommends its use also especially in chronic uremia, where the employment of morphine is believed by many to be contra-indicated.

But where he has found the remedy to be well nigh a specific is in the more or less continuous form of cephalalgia. The type in question commences at the patients awakening, and lasts the whole day; it may disappear toward evening, but if the patient happens to get up during the night, he will feel the trouble again. The pain is generally diffuse, extending over the whole head; this dull pain will at times grow intense for moments, and it may persist for weeks, months, and even years. Without being violent enough to interfere with occupations not requiring considerable intellectual effort, it constitutes a constant source of discomfort and seriously annoys the patient. It is observed in both sexes, and oftenest in youth and middle age.

This form of cephalalgia is almost always curable, it is stated, by the use of cannabis indica, alone or associated with other medicaments destined to combat concomitant disturbances. The author generally uses it in the form of extract, administering this at first in the doss of ½–3 centigrammes $\frac{1}{12}$–½ gr. in pills, evening and morning. If these doses prove insufficient, he prescribes 6 centigrammes (1 gr.) in the evening, and 3 centigrammes (½ gr.) in the morning. In particularly obstinate cases, he increases the dose (always giving the stronger dose in the evening) until a marked relief is obtained, or symptoms of intoxication appear.

In one of the two successive cases which are described at length, the author associated the extract of cannabis indica with gentian and cinchona, in the other with caffeine hydrobromate.

Cannabis indica is, furthermore, considered one of the best remedies in neuralgia, acting well also in the pain of tabes; and in gastralgia and enteralgia, it is said to be more or less successful.

In skin diseases accompanied with intense pruritus, where local sedatives are inefficient, the author resorts to cannabis, which, he says, is particularly useful in cases of senile pruritus. Only after the cannabis fails does he give chloral. It should be given preferably at bed time, pruritus being more intense and painful, as a rule, during the night; in severe cases, however, the remedy may be given during the day. In cutaneous diseases, the author prefers its application in the form of tincture, 20 drops of which correspond to 6 centigrammes (1 grn.) of the extract; 5–6 drops may be taken on a piece of sugar, and repeated as often as necessary.

The author has rarely observed untoward effects from this medicament; symptoms of intoxication were only very exceptional.

Nevertheless, to avoid any possible disagreeable effects, it is advised always to commence with small doses, and to increase them slowly, whereby toleration will be established.—Dr. S. Mackenzie in *Sem. Med.*

LOCOMOTOR ATAXY.—According to Prof. Fournier, the first symptoms of ataxy may be classed as follows:

1. Sign of Westphal.
2. Sign of Romberg.
3. The "stairs" sign.
4. Crossing of the legs.
5. Walking at the word of command.
6. Standing on one leg.

1. Westphal's sign is well known; it consists in the abolition of the patella tendon reflex, and is present in two-thirds of the cases.

2. Romberg's sign can be thus appreciated: The eye is an indirect regulator of motion; it helps to correct deviations in walking and maintains the equilibrium. When a patient is suspected of incipient ataxy, it will often suffice to make him close his eyes when in the erect position to verify the diagnosis. In a few instances his body will oscillate, and if the malady is somewhat advanced he will be in danger of falling.

3. The "stairs" symptom. One of the first and most constant symptoms of incipient locomotor ataxy is the difficulty with which the patient will descend stairs. If questioned closely on the subject, he will say that at the very outset of his malady he was alway afraid of falling when coming down stairs.

4. The manner in which a patient crosses his egs is often significant. In the normal state a man when performing that act lifts one leg simply to the height necessary to pass it over the other, whereas in the affection under consideration he lifts it much higher than necessary, describing a large segment of a circle.

5. Walking at the word of command. The patient seated is told to get up and walk instantly. After rising he will hesitate, as if he wanted to find his equilibrium before starting off. If, while in motion, he is told to stop short, his body, obeying the impulsion, inclines forward as if about to salute, or, on the contrary, jerks himself backward in order to resist the impulsion forward.

6. The patient is asked to stand on one leg, at first with his eyes open, afterwards closed.

Although man is not made for this position, yet he can balance himself pretty firmly for a little while. The ataxic will experience a great deal of difficulty and will instinctively call to his aid his other foot so as not to fall. If his eyes are closed he will not be able to stand one instant, and if not held he would fall heavily to the ground. Such are the symptoms of incipient locomotor ataxy. They will not be all present frequently, but they should be all sought for in order to avoid an error which might have grave consequences.—*North Am. Pract.*

DIDACTIC AND CLINICAL TEACHING.—The study of medicine as followed in the best medical schools is spread over a number of years, beginning with the foundation branches and ending in the last two years with the practical parts. While lectures of a didactic character may be necessary in part in the first and perhaps second years of the course, the laboratory work should form a large part of this half. After this, the didactic lecture should be put aside and cases should be intelligently and systematically followed in the wards and dispensary.

The schools that insist on the didactic lectures to the end, and have but one or two clinical lectures a day will hardly turn out the right kind of men. The making of good text-books and works intended to supplement the ward work can in a great measure take the place of the musty and often out-of date didactic lecture which is given in a perfunctory manner. Medicine alone needs object teaching more than any other of the professions. The proper study of mankind being man, it should be the duty of the medical school so to frame the course that the student, after he has mastered the rudiments, may study disease at the bedside, and after following out each symptom and sign, then to refer to, not read through, his books. In this manner of study, the treatment may be left to the last, but it should not be entirely neglected for the diagnosis. Americans living in Germany often have a German physician to make the diagnosis and then call in a practical American or Englishman to prescribe. The student needs diagnosis and then, as he proceeds, efforts as to forecasting the probable outcome of the disease should be made, for in private practice it will be found out what value people put on the right prognosis. The general class of drugs to be used will be known by their physiological action, and the doses are gradually acquired by constant prescription writing. It should never be forgotten that all books describe disease as it occurs on the average, and because a patient is ill he need not necessarily have one of the diseases as laid down in the books. There are atypical cases, and these as well as the typical ones can only be learned at the bedside. Therefore, the progressive school and one that wishes to turn out men fit to practice, and not theorists, will let the dry didactic lecture give place to bedside teaching and clinical lectures, and the result will be that a student will be ready to practice when he graduates, and will not have to sit in his office and wait for grey hair and venerable looks. The multiplicity of medical schools, and the competition between the poorest ones do not elevate the standard of the medical profession.—Ed. Maryland *Med. Journal.*

ALCOHOL IN NEURASTHENIA. By Græme M. Hammond, M.D., New York.—The diet to be observed in neurasthenia is a question which deserves a great deal of careful consideration In many cases the digestive organs fail to perform their functions properly, either because the digestive juices are not secreted in their proper proportion, or else chemical changes in their composition diminish or interfere with their activity. This results generally in quantitative indigestion, that is, the inability to digest more than a very limited quantity of food; but sometimes certain classes of foods seem to be discriminated against much more than others.

It is not my purpose in this article to consider the subject of digestion in neurasthenia in all its aspects, but to confine myself solely to the influence of alcohol on the digestion of the neurasthenic and on the neurasthenia itself.

The free use of alcohol is always more or less injurious to the normal individual, but it is particularly so in cases of neurasthenia. Patients of this description usually find out for themselves that the free indulgence in wines aggravates their headaches, increases their insomnia, induces more indigestion than they usually have, and augments their general symptom of discomfort. On the other hand, it has been my experience that small quantities of alcohol, given with the heaviest meal, frequently assists a feeble digestion. More than this, is seems to dissipate, for a time at least, the depression and confusion which are so often prominent symptoms. It is true that alcohol retards the action of pepsin in experiments performed outside of the body, but within the stomach diluted alcohol, in small quantities, seems to stimulate the gastric tubules and thus increases the secretion of gastric juice. It is the function of the gastric juice to convert proteids or nitrogenous food into peptones. A diminished quantity of gastric juice, therefore, delays or arrests the digestion of meats, albumin and gelatinous foods, all of which are nitrogenous and, as a class, are very necessary in supplying muscular strength and vitality. The gastric irritation consequent upon indigestion has in itself a depressing effect upon the nervous system. It has long been my custom, therefore,

advocate the ingestion of a small quantity of alcohol in the form of a glass of claret with the patient's heaviest meal. Of recent years I have used one or more of the various preparations of wine of coca, as it seemed to me the tonic and stimulating effects of the coca on the nervous system, together with the gastric stimulation from the small quantity of alcohol, had generally a more beneficial effect than claret alone. More recently I have used maltine with coca wine. Here the maltine, which contains diastase, materially aids in the digestion of the starchy foods, while the small quantity of alcohol it contains stimulates the secretion of gastric juice and thus assists in the digestion of the nitrogenous substance. On the other hand, the coca acts as a mild tonic and stimulant to the nervous system, diminishing the irritability and despondency and promoting the gradual restoration of nervous strength. Maltine with coca wine is a preparation agreeable to the palate, is a food in itself, assists in the digestion of starchy and nitrogenous foods, and is also a useful tonic to the nervous system. In this form moderate quantities of alcohol can be administered to the best advantage. — *Journal of Nervous and Mental Disease.*

THE PERILS AND RESPONSIBILITIES OF PRACTICE.—A curious tale which comes from Leeds not only draws attention to certain dangers to which doctors are especially exposed at the hands of angry and excited people, but suggests the propriety of thinking twice before speaking too openly of the ailments of their patients. Nothing can be easier than to beguile a doctor into a house in which he may be absolutely at the mercy of any ruffians who choose to maltreat him, and whatever may have been the provocation received in this case by the defendant, we are glad that the stipendiary-magistrate refused to consider it as an excuse, but imposed a fine of £3 and costs. It appears that a dentist, who was attending a young lady for her teeth, called upon her doctor and made particular inquiries regarding her health. It further appears that this unfortunate doctor, in response to these inquiries, "made a certain statement concerning her condition." *Hinc illæ lacrymæ!* The young lady's young man straightway beguiled him into her house, and after by threats inducing the doctor to give a written apology, said, "I shall thrash you all the same," and proceeded to do so. This may be a Yorkshire way of doing things, but it strikes us as unfair. We say nothing about the truth of the statement he is said to have made, but it is clear that a doctor often has to say unpleasant things, and the chance of having to risk ordeal by combat for so doing is decidedly one of the perils of practice. As to responsibilities, we would seriously ask whether medical men do not often talk far too much about their cases. Doubtless, the long hours sometimes spent in sick rooms, or the still more dreary hours spent while waiting to be called there, tempt men, from mere want of subjects for conversation, to draw on their personal experiences; but it should not be so; patients' cases should never be talked about. Then in regard to consultations, we think that unless one is asked by the patient to consult, the greatest reticence should be maintained. It ought not to be difficult to give such advice as may be for the good of the patient without entering into reasons or breaking confidence. Even in case of insurance companies and the extraordinary questions they sometimes ask, it is desirable to find out from the individual concerned that they are asked with his consent before committing oneself. The more strictly medical men put restraint upon their tongues and treat everything that is told them professionally, whether good or evil, as confidential, the more readily will they check that impertinent questioning about other people's affairs which is one of the never-ending nuisances of a doctor's life.—*Brit. Med. Jour.*

THE TREATMENT OF FURUNCULOSIS. — Van Hoorn, *Monatsh. f. prakt. Derm.*, treats furunculosis as follows: He first washes the whole of the patient's body with potash soap and tepid water; then he asepticizes the boils and the surrounding parts with a 1 in 1,000 sublimate solution, afterwards covering them with a mercurial and phenol plaster, which is changed every day. If the furuncles burst, the contents are squeezed out and the cavity washed with sublimate. The results are excellent. If there was no fluctuation in the furuncles, absorption takes place very quickly. If there was fluctuation, absorption is rare, but the disease does not spread; the boil opens and rapidly cicatrizes. During the treatment no further boils developed.—Loewenberg (*Bull Méd. Jour Cut. and Gen.-Urin. Dis.*, October, 1894) recommends the use of the actual cautery for the abortive treatment of boil. For this purpose he employs galvano-cautery irons ending in fine platinum points about a centimetre long and a millimetre in diameter. As soon as a furuncle shows its presence by a red areola surrounding a hair and by special sensitiveness to touch, he introduces the platinum point, brought to a white heat, into the centre of the areola, causing it to penetrate deep enough to act upon the whole length of the hair follicle, in the supposed course of which it is made to enter. The incandescent point is left for an instant in position and then withdrawn. When the furuncle has already begun to form we may still attempt to abort it; but we must in this case prolong the cautery so as completely to carbonize the small drop of pus which has already been pro-

duced. Brocq points out that French dermatologists have for a long time had recourse to the actual cautery applied by means of finely-pointed thermo-cautery tips, or, better still, with the electro-cautery, for the treatment of rebellious acnes, especially where there are large lesions on the face and trunk. In this way they not only succeed in curing the lesions more rapidly, but arrest the formation of new ones. It would seem as if the inoculable germs which produce acne are thus destroyed.—*Epit. Br. Med. Jour.*

THE DANGERS OF BROMOFORM IN PERTUSSIS.—Dr. J. B. Marvin says: "I have recently had two cases which illustrate some of the dangers of giving bromoform in suspension or emulsion. About two weeks ago there were several cases of pertussis among the children at the Baptist Orphans' Home, and the house physician prescribed syrup of lemon and bromoform in the usual mixture with gum Arabic, to be taken a teaspoonful at a dose, which contained 7½ minims of the bromoform, giving directions to always shake the bottle before pouring out the mixture. He also told them not to use the last few doses in the bottom of the bottle. One of the nurses, who had evidently not understood the instructions, gave two of these children, one aged 4, the other aged 6 years, the usual teaspoonful dose from the bottom of the bottle. This was given about eleven o'clock in the morning, The weather being exceedingly warm the children, trying to keep cool, afterward lay down upon some rugs in the room and went to sleep. At one o'clock the nurse in charge of the room went to awaken them and could not arouse the two children in question. Dr. Frank and myself were sent for and worked with them two and a-half hours before we succeeded in getting them aroused. There was not only slow respiration and feeble pulse, but impairment of all the reflexes—you could pull the eyelids open and rub the cornea without their flinching. After getting them revived, if left for a moment they would immediately fall asleep again. I roused one little fellow up and asked him if he wanted a stick of candy; he said, yes; I gave it to him, and he grabbed it and put the end in his mouth, biting off a piece, and he fell asleep again with the portion bitten off in his mouth. The pulse was very feeble, but still strong enough to keep the lips red in color.

The only difference I noticed between the action of bromoform and that of chloroform was that there was not the same amount of lividity that follows the administration of chloroform; there was the same pulse, respiration, and other symptoms. The children were perfectly limp, as though thoroughly intoxicated, with staggering gait, dizziness, etc. Both recovered, however, without any serious after-effects. The query arises, if bromoform might not form a valuable hypnotic.—*Am. Pract. and News.*

THE VALUE OF CHLOROFORM IN INTERNAL MEDICINE.—We are so apt to regard chloroform as a pure anæsthetic when taken by inhalation, that many of us are wont to overlook its value as an internal medicament, and, as a result of this oversight, lose a valuable aid to treatment in many affections, some of which are apt to resist the ordinary remedial measures. One of the most important applications of chloroform is its internal use for the relief of pain either in the chest or abdomen, pain in the latter region yielding naturally more readily to its influence. Particularly is this the case where the pain is of a griping character, either due to irritability of unstriped muscular tissue in the wall of the intestine, or to the presence of irritating foods or large quantities of flatus. Under such circumstances 20 to 40 drops of the spirit of chloroform added to two teaspoonfuls of water, and perhaps aided by 10 to 20 drops of the spirit of camphor, is one of the very best prescriptions that we can give. Further than this, those of us who believe in the value of antiseptic medication will recognize the fact that chloroform, under the circumstances which we have named, not only relieves the pain, but acts as one of the most powerful antiseptics which can be taken internally with moderate impunity. It is a well-recognized fact in therapeutics, that many volatile substances seem to exercise very considerable power in checking all forms of diarrhœa, and where pain in the abdomen is associated with liquid movements, chloroform possesses a third scope for usefulness. Not only is it of value in the forms of pain which are due to direct irritation or inflammation in the abdomen, but it is also useful in those pains which are due to nervous disturbance, such, for example, as in ordinary neuralgia of the stomach or true gastralgia. In obstinate vomiting, 2 to 5 drops of pure chloroform in a little water, taken in teaspoonful doses, will often act advantageously, and when the vomiting is due to the ingestion of bad food, particularly food which has undergone some decomposition process, it is especially indicated. In the vomiting of pregnancy, with some practitioners, it is held to be the best remedy. Another very valuable application of chloroform is its employment externally in liniments in cases of muscular rheumatism for stiffness of the muscles due to strain or excessive exercise. Possessing, as it does, not only counter-irritant, but anæsthetic effects, its employment in this manner is most advantageous. Another use to which it is too rarely put is for the production of counter-irritation varying from slight reddening to actual blistering of the skin. Slight reddening is rapidly produced by applying a cloth saturated with chloroform to

some portion of the skin so remote from the respiratory apparatus as to avoid inhalation in any large quantity, and the blisters may be formed by placing chloroform on the skin under a watch-glass, so that too rapid evaporation will not take place. For those who are unable to take opium in any combination for relief of pain in any part of the body, a prescription composed of 30 drops of spirit of chloroform and 10 minims of the fluid extract of a good cannabis indica is a valuable prescription.—*Therapeutic Gazette.*

VOMITING IN PREGNANCY.—Lutaud, *Rev. Obstet. et Gyn.*, states that vomiting of pregnancy is best treated by cocaine. The action of this drug is often strengthened by combining it with antipyrin. Thus the following prescription:

℞—Chlorhyd. cocaine, ... grs. jss.
Antipyrin, ... grs. xvi.
Aq. dest., ... ℥ iv.

Sig.—Teaspoonful every half hour until the vomiting ceases.

If the stomach will not tolerate this quantity of liquid, ten drops of a one and a-half or two per cent. solution of cocaine are administered, repeated at one or two-hour intervals.

At times the application of cocaine to the os is extremely valuable. The following prescription may be used:

℞—Hydrochlor. cocaine, . . . grs. xvi.
Ext. bellad., ... grs. iv.
Vaseline, ... ℥ ss.

Cotin's method of dilating the os with the finger sometimes causes immediate cessation of vomiting. Occasional success will follow Routh's procedure, which consists in exposing the uterine neck by means of a speculum and painting with tincture of iodine. In cases of moderate severity the following mixture will be found serviceable:

℞—Tinct. iodine, ... } āā ℥ ij.
Chloroform, ... }

Sig.—Five drops night and morning at meal times, taken in Seltzer-water.—*Kan. Med. Record.*

THROMBOSIS OF THE CEREBRAL SINUSES IN CHLOROSIS.—Kockel records two cases. The first patient was a girl, aged 19 years, who, after suffering only from headache for three days, became suddenly unconscious. When taken to hospital, she was in a state of profound coma; the pupils were unequal, and did not contract reflexly; respiration was irregular and intermittent; the temperature was raised. The limbs were motionless and flaccid; sensibility was diminished; the reflexes were increased. The patient died in less than twenty-four hours after becoming insensible. The autopsy revealed abundant effusion into the ventricles, together with a thrombus, which obliterated not only part of the transverse sinus in the neighborhood of the corpora quadrigemina, but also the great vein of Galen.

The second patient was aged 17, and presented a similar clinical picture—headache, vomiting for forty-eight hours, then sudden insensibility. After death there was found thrombosis of the great vein of Galen. The clot extended into the straight sinus, and into the transverse sinus on both sides. There was, in addition, softening of the cerebral substance in the lateral and superior walls of the lateral ventricles, as well as of the most superficial layer of the basal ganglia. The softening was of a reddish color, and was due to numerous small hæmorrhages.

The writer does not dogmatise on the question whether such cases are due to a true thrombosis or to a phlebitis from secondary infection.—*Gazette Médicale de Paris.*

TREATMENT OF DYSMENORRHŒA.—Dr. Schwarze, *Centralblatt f. die med. Wissenschaften*, divides dysmenorrhœa into two great groups—the one presenting manifest inflammatory affections of the genital tract, and the other in which these are absent. The non-inflammatory forms he comprises under the term constitutional dysmenorrhœa, including those cases without a demonstrable pathological basis, as well as those due to anteflexion, retroflexion or faulty development of the uterus. The displacement is not the chief factor, but rather a defective development of the uterus. Treatment of the second group is that of the co-existent chlorosis and the pains—antipyrine, phenacetine, antifebrine, exalgine, salicylate of soda; later, codeine, opium, atropine and belladonna, as well as morphine. He warns against the abuse of narcotics, and before attempting local treatment would try Thure Brandt's local gymnastics and viburnum prunifolium. This latter drug is given five to seven days before the expected appearance of the menses and during the same, in doses of a teaspoonful three times a day. In the non-inflammatory varieties he obtained with these measures excellent results.

As to local treatment, he speaks highly of local massage and regular dilatation of the uterus before the menses, if necessary, with tents. Before attempting instrumental dilatation he would try the galvanic current—from 50 to 150 milliamperes, with negative pole, an aluminium sound, in the uterus and the positive pole, a broad electrode, upon the abdomen; or the faradic current, with a bipolar electrode in the uterus. In obstinate cases which resist all treatment castration is eventually indicated. Hypnosis might be tried, as is recommended by Brunnberg, of Upsala, Sweden.—*Lancet-Clinic.*

THE PRODUCTION OF DISEASES BY SEWER AIR.—Jacobi, *New York Med. Jour.*, concludes his article upon the above subject with the following sentences: (1) The atmosphere contains some specific disease-germs, both living and dead. (2) They are frequently found in places which were infected by specific diseases. (3) In sewer air fewer such germs have been found than in the air of houses and school-rooms. (4) Moist surfaces—that is, the contents of cesspools and sewers, and the walls of sewers—while emitting odors, do not give off specific germs, even in a moderate current of wind. (5) Splashing of the sewer contents may separate some germs, and then the air of the sewer may become temporarily infected, but the germ will soon sink to the ground again. (6) Choking of the sewer, introduction of hot factory refuse, leaky house-drains, and absence of traps may be the cause of sewer air ascending or forced back into the houses. But the occurrence of this complication of circumstances is certain to be rare. (7) Whatever rises from the sewer under these circumstances is offensive and irritating. A number of ailments, inclusive, perhaps, of sore throats, may originate from these causes. But no specific diseases will be generated by them except in the rarest of conditions. For specific germs are destroyed by the processes of putrefaction in the sewers, and the worse the odor the less is the danger, particularly from diphtheria. (8) The causes of the latter disease are very numerous, and the search for the origin of an individual case is often unsuccessful. (9) Irritation of the throat and naso-pharynx is a frequent source of local catarrh; this creates a resting-place for diphtheria-germs, which are ubiquitous during an epidemic, and thus an opportunity for diphtheria is furnished. (10) Of the specific germs, those of typhoid and dysentery appear to be the least subject to destruction by cesspools and sewers. These diseases appear to be sometimes referable to direct exhalation from privies and cesspools. Very few cases, if any, are attributable to sewer air. (10) A single outlet from a sewer would be dangerous to general health, because of the density of odors (not germs) arising therefrom. Therefore a very thorough and multiple ventilation is required.—*Univ. Med. Mag.*

Chemical research proves that Kola contains a large percentage of caffeine (the active principle tea and coffee), also theobromine, the stimulating principle of cacao. But not to these alone is its remarkable virtue to be credited, as further investigation proves that the *fresh* (undried) Kola nut contains a peculiar active principle (glucoside) found in no other drug, to which the name of Kolanin has been given. This peculiar principle is found more abundantly in the fresh (undried) Kola nuts, and taking advantage of the knowledge of this fact, Messrs. Frederick Stearns & Company, of Windsor, Ont., have been the first to place on the market a Wine of Kola, for which they have coined the fanciful title "Kolavin" to distinguish their product from similar preparations, which in time will undoubtedly appear. "Kolavin" is a delicious aramatic tonic wine, each dose (a tablespoonful) of which contains 30 grains of the fresh (undried) Kola nuts. It is a prompt and active stimulant, and is useful in all cases where such a stimulant is needed. Samples of "Kolavin" may be obtained by addressing the manufacturers, Frederick Stearns & Company, Windsor, Ont., who are headquarters for Kola nuts in this country, having introduced the drug to the medical profession in 1881, and being the sole importers of the fresh (undried) nuts from Africa. Their scientific department has recently issued an elaborate monograph on Kola, profusely illustrated, which is worthy of a careful perusal, and will be sent to any physician who will apply for a copy.

SALICYLATE OF SODIUM IN HEADACHE.—In the February number of the *Practitioner*, Lauder Brunton writes an interesting article on headaches, in the course of which he points out that the one very common form of headache commences in this way: The patient sometimes feels a little unwonted irritability at night, but this irritability is not always present. It is very often the precursor of a headache. He wakes in the morning about four, five or six with a feeling of weight in the head, but not a headache. He is very drowsy, disinclined to rise, and is apt to turn over and go to sleep again at once. If he does this he awakes again about seven or eight with a distinct, but not a severe headache, usually frontal or temporal. As the day goes on the headache becomes worse and worse, until in the afternoon or evening it becomes almost unbearable. It then finishes up with sickness, after which the patient becomes easier, but feels much exhausted. A headache of this sort may frequently be prevented by the patient taking a mixture of bromide of potassium and salicylate of sodium over night, or by getting up and taking it when he awakes with a heaviness in the early morning, instead of turning over and going to sleep again.—*North-Western Lancet.*

CAUSE OF EARLY DEATH AFTER OPERATIONS ON THE INTERNAL ORGANS.—Thiercelin and Jayle describe the necropsies made on 7 cases of abdominal section (5 removal of appendages, 1 ovarian cyst, 1 abdominal hysterectomy) which had died, 6 within three days, and 1 within six days after the operation. In 5, including the case which lived six days, there was distinct acute fatty degeneration of the liver. In the remaining 2, where the lesion could not be detected by the naked eye, cloudy swelling of the

hepatic cells was discovered on microscopical examination. It is expressly indicated that in none of the 7 cases did suppurative peritonitis exist. Thiercelin and Jayle then examined the liver from a case of death from hæmorrhage six hours after operation for a ruptured extra-uterine fœtal cyst. The liver was absolutely free from fatty changes. But in the liver of a child that died a week after an operation for congenital dislocation of the hip, acute fatty changes were discovered. The same condition was seen in the liver of a man dead from septicæmia due to phlegmonous inflammation of the larynx. Other evidence is brought forward to show that in all the above cases the liver is infected by streptococci. Cirrhosis, etc., predispose greatly to this infection after laparotomy.—*Archives of Gynæcology.*

SUBNORMAL TEMPERATURE IN THE HUMAN BODY.—Subnormal temperatures are considered to be more frequent than was formerly supposed. The histories of the Medical Clinic of Kiel have been searched for the past fourteen years, with the result that over four hundred cases of subnormal temperature were discovered. It is the custom in this hospital to take the temperature of a patient free from fever between six and seven in the morning, and in the evening between five and six, while the usual rule is to take the temperature of fever patients every two hours. The thermometers were tested every three months, and the temperatures were uniformly taken in the rectum. From experimentation upon two hundred patients suffering from skin and venereal diseases, but without fever, the average minimum subnormal temperature was found to be 36.6° C. between six and seven o'clock in the morning, and 36.5° C. during the hours of five and six in the evening. A temperature below 36.5° must therefore be considered subnormal. A number of interesting cases are cited belonging to the following classes: 1. Subnormal temperature after direct deprivation of heat. A drunken man, aged twenty, fell into the water in winter. On removal his temperature was found to be 32.3° C., which quickly returned to normal. 2. After severe loss of bodily fluids, as in severe diarrhœa. 3. In chronic anæmia, cachexias, and conditions of inanition. Of one hundred and thirty cases of uncomplicated carcinoma, fifty-four showed subnormal temperatures. 4. By severe disturbances of circulation, as in a case of mitral stenosis and anasarca, in which for twelve days there was a subnormal temperature. 5. By various diseases of the central nervous system. Numerous cases are here cited. 6. After irritation of the sensory nerves; also in neuroses of a vaso-motor origin, as after wounds, gall and renal colic, etc. 7. By wide-spread lesions of the skin, as in scleroma and extensive areas of burning. 8. In feverish patients, both during the course of the fever and in the stage of defervescence of the fever. 9. In the action of certain poisons, including in this class some poisons which may be produced in the body itself. An old man took sulphuric acid with suicidal intent, and then threw himself into water at a temperature of 37° C. The temperature was found to be 31° C., and was undoubtedly largely due to the action of the acid.

A reduction in temperature under 33° is not remarkable, as thought by Wunderlich. The signification of a marked subnormal temperature is not, therefore, necessarily ominous. A very unfavorable prognosis should be given in cases of cachexia and marasmic conditions when a continuous low temperature is present, as this often precedes a fatal termination.—*Rev. of Med.*

A REMEDY FOR WHOOPING-COUGH.—Early in May of the present year I received, by the kindness of Schering & Glatz, a sufficient quantity of formalin to thoroughly test it under various conditions. The results proved beyond doubt its remarkable antiseptic properties. Its action as a general antiseptic I shall not dwell on, but desire to call attention to conditions where it showed peculiar and valuable characteristics, especially in whooping-cough.

There is probably no disease of childhood so discouraging and intractable, and especially when it appears in juvenile institutions, so persistent in its development of new cases among the uninoculated. On the 15th of June, whooping-cough being epidemic among the children at the Crittenden Home, near this city, I was requested to treat them. There were thirteen cases, in all stages, when the treatment given below was commenced. The patients were all placed in a closed room and a one per cent. solution of formalin was sprayed from an ordinary hand bulb atomizer for ten minutes three times a day, the spray being thrown above the heads of the patients, saturating the air and inhaled by them.

A marked improvement was noted within two days, and after two weeks' treatment all were well and no new cases have developed.

In age these cases ranged from three months to four years, with one exception, a girl of about fourteen, whose duty it was to operate the spray.

It was with this last case that the result was most marked. Previous to the use of the spray, the paroxysms had been so violent that she would rush to the open air and cling to some support, and cough until relief would come through sheer exhaustion. On the fourth day of the treatment the cough had so modified that only one or two comparatively mild paroxysms occurred, and after the fifth day none at all.

About the 20th of August, I treated fifteen

cases of the same disease at the Inman Orphanage. Here I used the steam atomizer and a one per cent. solution of formalin for twenty minutes, three times a day, the room being closed as before. The result was better from the increase. Recent cases cured within a week, and all in ten days. The attendant, a woman of about 50, reported great relief from the effects of the spray of a troublesome bronchitis of years' standing.

These results undoubtedly prove the efficiency of the drug, and give it a definite position in the treatment of this harassing and heretofore intractable disease.

The simple method of application will appeal to all who have seen the disease in children's institutions, and experienced the difficulty of giving ordinary remedies.

In five cases of scarlet fever its modifying influence was immediate and marked, one comfort to the patients being the complete absence of flies and mosquitoes from the apartment after its use.

I am now testing its efficiency in two cases of pulmonary tuberculosis, but cannot report, as the treatment has only just begun. Its application to diphtheria suggests itself.—*N. Y. Med. Times.*

TUBING MADE EASY IN TYPHOID.—The greatest benefits produced by the application of cold water in typhoid by the Brand method are not due to reduction of temperature, but arise from the increase of the elimination of toxic products through the excretory organs, thus limiting their power to depress the vital force of the nervous system. The cold water acts as a powerful stimulant to the central nervous system through the sensory reflexes of the cutaneous surface, and through the respiratory centres deep reflex inhalations are stimulated, which are of great importance in oxygenating the blood and sending it with increased force to all the organs of the body and so re-enforcing their functional activity. According to the experiments of Roque and Weil, the toxicity of the urine of patients treated by the antipyretic coal-tar compounds is about the same as, or even less than, that of normal urine. This toxicity is increased twofold by the expectant plan of treatment, and sixfold by the Brand baths. The author mentions the obstacles which prevent the use of this treatment, and then describes a folding mattress bath-tub of his own construction which he believes will remove all objections. It consists of a folding crib-like frame of poplar six feet two inches long by two feet wide and eight inches deep; along the outside of the lower rail are fastenings for holding rings, which are attached to the edges of a rubber sheet two and a-half yards long by one and a-quarter yards wide. The rubber sheet is slipped under the patient and drawn up over his pillow, and its edges tucked up alongside his body. The crib frame is then unfolded and placed over the patient, resting upon the mattress and surrounding the patient, pillow and rubber sheet. The edges of the sheet are then drawn up over the top rail of the crib and down the outside, and the rings hooked into the fasteners. In this light and perfect tub the patient rests undisturbed on his comfortable mattress and pillow. The tub is filled by siphoning water from elevated buckets, and, after the bath, is emptied by siphoning into buckets on the floor. By means of this simple, inexpensive tub a bath can be readily modified in various ways without exhausting the patient, and no strain in lifting is required of the attendant. The author hopes that this device will make the Brand treatment more popular and will extend its good offices in the saving of human lives.—*Rev. of Med.*

A NEW METHOD FOR THE TREATMENT OF WOUNDS.—We have had the opportunity of studying the new treatment of wounds devised by Dr. George Stoker, and find it to start from the original idea of using the stimulating effects of oxygen on a granulating surface; the *primâ facie* idea not being one of antisepticism. The method consists in keeping the part of the limb on which the wound or ulcer is present in an air-tight wooden box the upper part of which is glass, and which, at the extremity where the limb enters, is closed by an india-rubber funnel fitting to the limb and kept *in situ* by a turn of a Martin's bandage. To this box are connected three india-rubber tubes about three-sixteenths of an inch in diameter. Through the first, the attendant at stated intervals pumps in warm air by a plan closely resembling that used in a Higginson's syringe, the warm air, however, passing through two bottles, one containing Condy's fluid and the other lime water, whilst in a glass portion of the tube itself it traverses menthol and medicated wool. Through the second tube the oxygen is carried in. The third tube is utilized to carry off any impure air into a bottle of Condy's fluid. The treatment is commenced by pumping in the warm air for about three minutes; this is done first, as it is found that the pure oxygen is too stimulating. Next the oxygen is turned on, and this is continued at a very low pressure, and not even shut off when the warm air is pumped in again at intervals of a quarter of an hour; pain, which is increased by dryness, is relieved by this method. The ulcerating surface is dressed twice a day with dilute warm boracic solution, with which it is gently syringed and the scabs removed, the box of course being taken away during the dressing. The treatment necessitates the constant attention of a nurse, who has to a certain extent to be specially trained. The cost is about one farthing per hour, but this probably, Dr. Stoker asserts, could be

considerably reduced. Through the courtesy of Dr. Stoker we were enabled to see a patient under treatment; the subject certainly was not a favorable one. The ulceration, which was probably specific, half encircled the right leg of a middle-aged woman, rather stout, and suffering in addition from chronic eczema and heart disease; the ulceration had been treated for a considerable period in the ordinary manner, but without success. Under the new treatment the ulcerating surface looked clean, the granulations were healthy, and Dr. Stoker hopes soon to see it entirely healed.—*Med. Press.*

PHYSIOLOGICAL REST IN THE TREATMENT OF PROLAPSE OF THE RECTUM. — Bryant, *Mathew's Medical Quarterly*, reports the case of a man operated on seven times for the relief of extensive prolapse of the anus, with its attendant distressing symptoms. Until the last operation, surgical intervention had been of little benefit. Bryant, to whom he finally came, made an artificial anus in the left groin, putting the patient to bed for two weeks, meaning to proceed to further treatment. But this operation was followed by so much relief and by such a marked diminution in the pressure that he was content to adopt no further procedure. He submits the following proposition as a conclusion to his paper:

That the proper performance of the physiological functions of the rectum contributes greatly to the advancement of rectal disease and to the afflicted.

That the complete vicarious discharge of the fæces through an artificial anus located in the sigmoid flexure reduces the physiological demands on each structure of the rectum to a minimum.

That the lessening of the physiological requirements is commonly in direct proportion to the diminution of the fæcal flow through the rectum.

That the cessation or lessening of the fæcal discharge per rectum exercises a palliative and curative influence on diseases of the rectum.

That in certain cases of obstinate rectal prolapse the formation of a vicarious channel for fæcal discharge is justifiable, both as a palliative and curative measure.

That the preliminary establishment of such a channel for the purposes of cleanliness and the prevention of infection is justifiable in many grave operations for prolapse of the rectum.

That the dangers attendant on the formation of an inguinal anus are much less than those invited by the contact of fæcal discharges with large operative surfaces of the rectum.

That the case just presented has been, without special risk, greatly benefited, and may be finally cured, through the agency of an artificial anus.

That when cure takes place, great care must be exercised thereafter, otherwise the prolapse will return.—*Therap. Gaz.*

THE PHYSICIAN AS TRADESMAN.—Formerly, there were three "learned professions"; then other pursuits made claims to stand on a parity with these, both as professions and as learned; more lately all pursuits have been styled in the vernacular professions, and all their followers professors; and, last of all, comes the period when no pursuits are professions and no men are learned. All occupations become trades and all men tradesmen. A contributor of a paper entitled "The Commercialization of Medicine, or, The Physician as Tradesman," evidently thinks that this last period has been entered upon, at least in this country.

Although we cannot accept his position in its entirety as applied at any rate to the Eastern States, there is evidently a considerable measure of truth in his forecast of a hard and unpicturesque reality. The times have changed, and are changing; we have changed, and changing with them. It is inevitable, and the newer the country the greater the change. Whether human existence is gaining or losing remains to be seen; but life presents less individualism, less repose of thought or action, less of the picturesque and the mellow. Every one has all kinds of fruit at all seasons, picked before it is ripe, that it may be rushed to the best market by rail or steamship, and cold storage does the rest.

The profession of medicine and the physician have undergone the change along with all else, and must continue to march with the music. We think that commercialization has affected the physician as little in Boston and New England as anywhere in the United States, but it must be granted that our doctor of to-day is no more like his predecessor of fifty years ago than is our modern "merchant" like his predecessor in the palmy days of the old China trade.

Even in the laboratory "business methods" are very desirable, and in the field of practice the doctor without them is heavily handicapped. The practising physician must know how to handle his cotemporary men and women, as they are accustomed to being handled in other relations of life, in order to get patients; and how to "turn off" his clients in a thoroughly business-like fashion, in order to get more than he can properly attend to.

Trade and collectivism have made and will make their mark upon the medical profession; but its days as a profession based upon learning are not quite yet numbered, and the personal equation will still continue to be a large factor in its practice.—*Boston Medical and Surgical Journal.*

THE MENTAL CONDITION IN CHOREA.—Dr. A. Breton, after an investigation of a large number of cases of chorea, has arrived at the following conclusions in reference to the condition the of

mental powers in patients suffering from this complaint. He has found that the majority of cases of chorea are complicated by perversion of mental processes more or less marked. The psychical symptoms may be divided into two groups: in the first he places those which include alterations of moral sensibility, of character, of intelligence, want of attention, and loss of memory and of affection for those nearly related to the patient; and in the second those which occur more rarely, such as "night terrors," hallucinations, and what Dr. Breton terms "folie choréique." The first class of phenomena are so common as almost to form one of the ordinary symptoms of chorea. Fright, terrors, and hallucinations are rare, while "folie choréique" is very exceptional. Hallucinations are generally observed at night, just when the patient is falling asleep, but they may continue for some time, interrupting or preventing sleep; those of sight generally predominate, but more rarely there may be observed those of hearing, taste, smell, or even touch. Affections of speech may also be mentioned, affecting the muscles of the tongue and lips, not caused by chorea, but due to mental causes. "Folie choréique" may take the form of simple mania, of delirium, of mania with hallucinations, or revert to a melancholic form, with profound depression and suicidal tendencies. Recovery from the mental symptoms in acute cases of chorea usually follows the cessation of the motor symptoms caused by the chorea: they cease when convalescence from the primary disease is established. But the neurosis may pave the way for permanent psychical trouble, such as moral degradation, mental alienation, and dementia. Dr. Breton, however, believes that the more pronounced psychical phenomena met with in the course of chorea are not directly due to the disease, but only receive from it special characters. They are complications rather than symptoms proper, and hereditary taint can always be traced; and he would look upon them as mental phenomena occurring in patients who have a hereditary tendency to such attacks, which have been precipitated by the chorea.—*Lancet.*

THE INFLUENCE OF THE ABORTIVE TREATMENT OF SYPHILIS ON THE NERVOUS SYSTEM.—Deutsch, *Archiv f. Dermatologie u. Syph.*, calls attention to the fact that symptoms of involvement of the nervous system are often among the first of those which show that syphilis has become a constitutional disease. Thus, among the prodromatic, pain in the head, kidneys, psychical disturbances, pallor, and nausea are well recognized, and are attributed by Lang to meningeal irritation. Occasionally sluggishness or inequality of the pupils is noticed, neuralgia, greediness, excessive thirst or drenching sweats, all these signs denoting irritation of the brain and its meninges. A similar condition of the spinal cord and its envelopes is indicated in the prodromal and exanthematous period by very marked increase in the reflex excitability of the skin and tendons, followed by a rapid diminution, sometimes amounting to complete absence, which may last for several weeks after the exanthemata have disappeared. All these signs show early involvement of the nervous system, and suggest the advisibility of attacking the poison at the earliest possible moment and weakening its virulence. As a matter of personal experience, Deutsch states that in patients who were treated with mercury early,—that is, immediately after the appearance of the chancre, or at least before the development of secondaries,—symptoms denoting involvement of the nervous system did not develop; whilst in those not treated until secondaries were well marked, such symptoms were the rule. Moreover, so far as tertiary manifestations are concerned, these did not attack the nervous system in cases which received early treatment.—*Therap. Gaz.*

A TRUE STORY. — A correspondent sends the following, for the truth of which he vouches: A young doctor who began his practice in Texas, west of Houston, was called to a confinement case in which he, being green and nervous, naturally had some trouble, the patient seeming unable to make the supreme effort for final expulsion. The only other occupant of the wretched quarters was an old crone in a sun-bonnet, who was silently but steadily rocking herself near the foot of the bed. Finally the old woman croaked out, "Doc., I wouldn't bother any longer with that woman, I believe I'd quill her and have done with it." The medical man not knowing what "quilling" meant, answered that he did not quite see the necessity for that yet. The old woman repeated this suggestion several times, until finally the nervous, exasperated man turned angrily on her and said, "Madam, I'll be d——d if I will do it. If you want to quill her you can do so, but I won't." The crone took from the wall a turkey wing, and, drawing a feather from it, proceeded to fashion something like a long quill toothpick, and filling this with snuff from her own private stock, leaned over the patient, and as the next pain came, blew the snuff into the woman's nostrils. Quick as a flash the woman responded with a giant sneeze, and the child was born with a sneeze. "Thar," said the old woman, radiantly, "I knowed mighty well that thar bust would make her break her holt." And it did, to the great instruction of the attending physician.—*Medical Record.*

THE LASH OF ANTI-VIVISECTIONISTS.—The Anti-Vivisection party are never sparing in their abuse of the scientific workers in the profession,

and the incumbent of St. James', Marylebone, whose predilection for silver coins in contradistinction to copper ones is conspicuously announced upon the walls of his church, politely delivered himself of the following opinion at a recent anti-vivisection meeting: "If there are two parties of medical men, I prefer to be on the side of the medical men and the angels, and against the medical men and the devils." We cannot quite grasp the meaning of this curious avowal. But to have reminded his audience that he preferred angels to devils was an admission which might be described as a platitude. Indeed, he would find a difficulty in meeting with anyone who would be bold enough to assert the contrary. However, he has propounded a conundrum in the matter which we cannot pretend to solve, that is to say, we fail altogether to see what either angels or devils have to do with medical men. So far as we know, neither are taken into consultation by medical practitioners during the course of their daily work, and this can be asserted with any emphasis based upon a profound conviction.—*Med. Press*

MENTAL SEDATIVES.—Thousands of men and women, says the *London Spectator*, use novels as mental sedatives, read them to steady their nerves. Busy brain-workers or those who otherwise exhaust their nervous energies, want some form of mental sedative. They cannot rest while doing nothing. In order to quiet the thinking machine, it must be kept gently at work. The easier and more mechanical that work is the better, but the mental powers must just be kept running. A douche of fiction quiets them, so novels are poured over the weary in a gentle easy stream. This physical need creates the novel market. To one accustomed to use fiction to soothe his mind, there comes a positive craving for novels, like the craving for any other sedative. Hence the demand for fiction, good or bad, of a kind that does not obtain in other forms of literature. And if the novel is in a foreign language, be it said in passing, the sedative effect is complete.—*Med. Record.*

INTRA-UTERINE INJECTIONS IN ANTIQUITY.—At a recent meeting of an Edinburgh medical society Dr. Ballantyne quoted from a paper by Koromilas, a Greek physician, in which it was claimed that there was evidence in the writings of Hippocrates, Oribasius, Paulus Ægineta and Galen to show that these authors were acquainted with the use of intra-uterine injections. Hippocrates divided the degenerative organs into three parts—first, the external genitals; second, the genital organ or vagina; third, the uterus. He also used for each a special kind of substance to be injected; wine with honey for the external genitals, goose-grease for the vagina and oil with honey for the uterus. Dr. Koromilas believed that Hippocrates was the first to make intra-uterine injections.—*Med. Rec.*

TREATMENT OF HYDROCELE IN CHILDREN.—Dr. Herwig has employed the following procedure for the past two years: By means of a slightly curved needle he passes a strong, sterilized, double silk or cotton thread from the upper to the lower extremity of the hydrocele. He then aspirates the fluid with a Pravaz syringe, removing what remains as completely as possible by means of pressure. The ends of the threads are then firmly knotted on the surface of the scrotum, and the three punctures, or the entire half of the scrotum, covered with collodion. No dressing is required. At the end of six to eight days the threads are withdrawn, and collodion re-applied to the puncture openings. In adults a larger number of threads are necessary.—*Centralbl. f. Chirurg.*

TO RELIEVE THE THIRST OF DIABETICS pilocarpin may be administered in solution or in pill-form. The pills are best prepared by the addition of glycerin and gum arabic. Each contains gr. $\frac{1}{10}$ of pilocarpin nitrate. For the solution the following form is given:

℞.—Pilocarpin. nitrat., ... gr. ½.
Spirit. vini dilut., ... ♏xx.
Aquæ, ... ʒj.—M.

S.—The tongue is to be moistened with 5 or 6 drops of this solution four or five times daily.—*Nouv. Remèdes.*

APPLICATION FOR CONDYLOMATA:

℞.—Acidi Tannici, . . . Partes æquales.
Hydrargyri Subchloridi, " "
Amyli, ... " "
Misce et fiat pulvis.

Sig.—To be dusted on the affected parts.
—*The Practitioner.*

W. H. CUNNINGHAM, M.D., Butler, Al., on November 15th, writes: I have been using "PAPINE" for about a year. It is not only retained in the most irritable conditions of the stomach, but will also control nausea and vomiting with more certainty than any other remedy. Even in acute gastritis it controls the vomiting better than morphine hypodermically. A number of ladies in my ptactice cannot take morphia on account of nauseating after-effects. The Papine has *never* in a *single instanc* produced any unpleasantness. As an anodyne for children (from two months up) it is simply inimitable. Permit me—without solicitation—to express to you my thanks for the production of a remedy so useful, and in many instances absolutely indispensable.

THE CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* DR. J. L. DAVISON, 12 Charles St., Toronto.

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AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MAHLER 23 Rue Richer, Paris.

TORONTO, JANUARY, 1895.

Editorial.

THE ONTARIO ANATOMY ACT.

Our people in Ontario need educating on a subject of vital importance to medical education, viz., the giving every facility for an amply sufficient supply of anatomical material, in order that our medical students, in whose hands, as their doctors, the people will have to trust the lives of themselves and of those dearest to them, may be accurately and fully acquainted with the body in every part, and thus be physicians and surgeons worthy the name. Without the fullest knowledge of anatomy, no man is fit to practice in any capacity either with safety to his patients, or with credit to himself. We have an Anatomy Act which provides that the unclaimed bodies of persons dying in public institutions, strangely excepting lunatic asylums, shall be handed over for the purposes of anatomical and surgical study to inspectors of anatomy, government officers, whose duty it is to distribute them with absolute fairness amongst the teaching medical colleges, according to the number of students in attendance at each.

Unclaimed bodies only, *i. e.*, those of persons dying in institutions where they have been supported perhaps for years at the public expense, and who have no relatives whose susceptibilities might be wounded by so appropriating them, are given under the Act for this most essential purpose. The supply is by no means all it should be, or anything like it. Not that the Act is so defective—for with a few exceptions it is a very good Act—but from the people not taking a proper view of the matter, not having in this direction as much intelligence as they should have, and as in many other things they undoubtedly manifest. Objections are being continually raised, and difficulties thrown in the way, of the carrying out of the Act, which, if persisted in, will either seriously injure medical education, or, as is far more likely, will lead to the necessary supplies being obtained in ways far less desirable than those provided by the Act. The Act provides, and the provision is carried out by the colleges, that after having been used for purposes of science, the remains shall be interred, and we from our own personal knowledge certify that at considerable cost, this is regularly done; yet in spite of all the kindly and wholesome safeguards of the natural susceptibilities of the people, provided by the Act, men who have charge of county industrial homes, and even of jails, and sometimes of city morgues, throw every conceivable difficulty in the way of sending notice of unclaimed bodies to the anatomy inspectors, and make all sorts of appeals to County Councils, which bodies, instead of calmly considering how absolutely essential it is to the welfare of every man, woman and child of our population, that we should have perfectly well-educated doctors, are carried away by such appeals, and one such body has even recently memorialized the Governor-in-Council on the subject, desiring specially to have Industrial Homes exempted from the operation of the Anatomy Act. Were this done, it would simply necessitate such means of getting the supplies, which *must be had*, as would very soon open the eyes of the members of County Councils, and of all other officials, who from mistaken sympathy, throw difficulties in the way of carrying out the Anatomy Act, which was passed for the double purpose of advancing science, and guarding the feelings of the community from being outraged, as they constantly are, where no legal provision is made for studies so indispensable as anatomy and surgery.

In Quebec, of all places, is where one would expect difficulties in the way of the carrying out of such an Act. There are now, as a matter of fact, none; and the Quebec Act is a far more satisfactory one than that of Ontario, for it embraces lunatic asylums as well as other institutions aided from public funds. In the past in the

Province of Quebec there was great and constant trouble, occurring year after year. Determined, and for a time successful, opposition was offered to the passing of such an Act as was required.

As a supply had to be obtained, Act or no Act, the outrage resulting from the want of such an act continued and increased, and culminated in the body of a prominent and well-known citizen being taken from the grave. This brought matters to a crisis, and opposition to the passing of the Act having ceased, it became law, and there is now no trouble, there are no outrages such as used to be occurring almost weekly during a great part of the year, and the needs of science are provided for.

In Ontario as the Act now is, the supply will suffice for every purpose, provided no opposition is made to its being carried out. And we look for this from the proper officials. And who are the proper parties to instruct such officials as manage our jails, industrial homes, hospitals, etc. ?

Surely medical men all over the country, alone are competent to do this fully and well, for they know as no other men do, how foolish opposition of the kind we complain of is, and what injury must arise from it, if it does not cease. Medical men should make it their business to put the members of our Legislature right on this important subject, so that mischief and injury may not be done by members allowing themselves to be carried away by the one-sided representations of those who from being more kind-hearted than intelligent, have permitted themselves to be influenced against an Act which is not only indispensable, but most beneficent.

ETIOLOGY OF ACUTE CEREBRAL AND CEREBRO SPINAL-MENINGITIS.

It has been recognized since the beginning of this century that a form of the above disease is epidemic; as also that sporadic cases occur at any time. The classical "spotted fever" form is not met with nearly so frequently now as it was a quarter or half a century ago, when epidemics occurred chiefly in the winter and spring.

Leaving out the predisposing causes, such as age, sex, environment, etc., we wish to call attention to the interesting fact that an acute meningitis may be due to a great many infective agents, and that unless it be in the spotted fever of the older school men, no one specific cause exists.

The number of cases of inflammation of the meninges which do not conform to this classical type with eruption, are so numerous that the immediate factor or factors in their causation become matters of great interest not only to the pathologist but to the physician in daily practice. And that this is so, is evidenced by the number of investigations which are being carried on in regard to the immediate causation of the disease. The results of such investigations appear to be that so-called primary meningitis is extremely rare, if it exists at all; that traumatism is not one of the most frequent causes, and that by far the greater number of cases are directly traceable to some local or general acute infectious process. And it would be interesting to know how many of the cases due to trauma have been really caused by infection of the wound. Have we not all seen cases of fracture of the skull, and injury and disease of the cranial bones and soft parts about the head, run a benign course with no resulting meningitis? and so are not cases of meningitis said to be due to trauma, really due to trauma, plus infection of the lesion?

Dr. Biggs Wilder, *Quarter-Century Book*. has given the results of the bacterial examination of eighteen cases. He found in one case pure cultures of the anthrax bacillus; in one case bacillus coli communis; in one case B. coli communis and proteus vulgaris; in four cases the pneumo-bacillus of Frænkel; in two cases the streptococcus pyogenes; in one case the diplococcus intracellularis meningitidis, and in two cases a mixed infection.

He also draws the following conclusions:

1. "Purulent or sero-purulent meningitis is always microbic in its origin.

2. "Many cases of cerebro-spinal meningitis do not differ from cerebral meningitis except in the extent of *pia* affected. The etiological factor may be the same.

3. "Cerebro-spinal meningitis is usually primary.

4. "Cerebral meningitis is usually secondary to some infectious disease, and is only occasionally primary.

5. "When the disease is secondary, the cause

of the secondary infection may be a different organism from that producing the primary disease.

6. "The following organisms have been previously found in the *pial* exudate in cerebral meningitis: The pneumo-bacillus of Frænkel, the streptococcus pyogenes, bacillus typhosus, staphylococcus pyogenes, pneuma-bacillus of Friedlander, the bacillus of 'La Grippe' and the gonococcus." The author's observations have added two new ones, bacillus anthracis and bacillus coli communis.

7. "The pneumo bacillus of Frænkel is the most frequent cause of cerebral meningitis.

8. "The latter organism is a not infrequent cause of primary cerebral and cerebro-spinal meningitis, the lungs not being involved.

9. "The cases of meningitis due to different organisms do not show such constant differences from each other in the symptoms presented, as to make possible the clinical differentiation as to cause.

10 "The amount of exudation bears no constant relation to the severity of the symptoms.

11. "It is not possible to distinguish with certainty during life, cases of acute cerebral hyperæmia, with or without œdema, from cases of meningitis."

THE RECENT MEDICAL COLLEGE DINNERS.

The time which has elapsed since the holding of this year's medical banquets renders it unnecessary for us to say more than that they came off with the usual *eclat, abandon*, etc.

Mr. George Elliott proved a very eloquent and admirable chairman at the Trinity banquet held at the Rossin House, Nov. 29th. The whole affair was the most enjoyable, and also reasonable dinner we have had the pleasure of attending.

The banquet of the students of the Medical Faculty of Toronto University, Chairman, W. T. McArthur, was held one week later, and was also a great success.

ANTIPRURITIC OIL.—Bronson's formula for an antipruritic oil is—

℞—Acidi carbolici . . . . . ʒi.
Liq. potassæ . . . . . ʒi.
Ol. lini . . . . . ℥i.—M.
Sig.—Shake before using.

TREATMENT OF NEURASTHENIA.—Dr. Krauss, in the *Buffalo Med. and Surg. Jour.*, gives among the prominent symptoms of this disorder: Moroseness, fault-finding, dull aching in the occiput or at the vertex, and in the lumbar spinal region. Following these come tachycardia and palpitation, sinking spells, hot flushes, profuse perspirations on the face and extremities, indigestion, short attacks of jaundice, scanty secretion of urine of high specific gravity, temporary sexual impotence. Great stress is laid on the appearance in all cases, with vascomotor symptoms, of a dilatation of one pupil with a contracture of its fellow. The author thinks this due to derangement of the sympathetic nerve.

For treatment the cases are subdivided into (1) those with a lithæmic element; (2) those without a lithæmic element; (3) those with marked vasomotor disturbance. After trying to find and remove the cause of the disorder the asthenic cases of the first two divisions are ordered to take, before rising, two ounces of strong, black coffee, and in a half hour take a tepid sponge bath for about five minutes, then dress and take breakfast. The plethoric cases receive, instead of this, one-half ounce or one ounce of a saline cathartic, followed by a cold bath, and if possible a cold plunge. Just before retiring a warm general bath is taken. For from five to eight minutes a galvanic current is applied with the electrodes on the sacrum and the neck, then the positive pole is applied to the forehead and a weaker current turned on, and, finally, with the electrodes to the hands as strong a faradic current is applied as the patient can bear. This treatment is given once, twice, or thrice weekly; the severe cases receiving treatment three times weekly. Massage may be given also, the lithæmic cases receive after meals one to three tablets, each containing lithium carbonate, 3 grains; phosphate of iron, 1-3 grain; extract of nux vomica, 1-9 grain; arseniate of soda, 1-27 grain. The author claims that patients who seem unable to take iron in other forms use this tablet with benefit, and that it acts well also in cases of chronic rheumatism. Non-lithæmic cases are given bromides, hyoscyamus, tincture of nux vomica, albuminate of iron, phosphoric acid and pepsin. Trional in five or ten grain doses is the favorite hypnotic. Cases with vasomotor disturbances have been intractable and unsatisfactory.

ON THE TREATMENT OF CANCER BY INJECTIONS OF IODINE AND CARBOLIC ACID.—Surgeon Lieut.-Colonel T. Robinson, I. M. S. (Chiswick), writes, *Br. Med. Jour.* On July 16th, 1893, I published the result of treatment of two cases of cancer, and a hope was expressed that the treatment, which was described, might be tried by someone who had more opportunity of seeing such cases than fell to my lot. The treatment in both the cases related consisted of injection of a saturated solution of iodine in commercial carbolic acid; the syringe was charged with ℥ 20, the needle introduced at the margin in any direction towards the middle of the mass, two or three drops pressed out, then partially withdrawn, sent in another direction, a few more drops ejected from the syringe, and so on till the whole contents had been got inside the cancer. Surgeon Lieut.-Colonel Robinson recommended that the injection should be made every day in large epitheliomata, every second day in small ones. Sometimes the point of the needle was found to get into a fissure, and the black, strong fluid appeared on the surface, where, if it did little good, it did no harm. The syringe and the fluid should be warmed before use, otherwise the needle becomes clogged. The idea underlying the treatment is this: wherever the blood can go in epithelioma, and that is to every part, this fluid can go too. Since then I have had one case (epithelioma of lip), which under the same treatment is now practically cured. The patient (a peasant woman otherwise healthy, aged about 60, widow of a man who died of cancer of the upper jaw) first noticed her ailment about March, 1892, but only within the present year did it grow rapidly. The treatment began on July 25th, the epithelioma being the size of a half-crown piece, and was continued with only one day's intermission until August 9th. The amount injected was ℥87, and afterwards ℥11. But it is doubtful whether any specificity remained after August 9th. The treatment is rather long (including the after-treatment), but it seems to be effectual.

WHY PATIENTS RECOVER FROM TUBERCULOSIS OF THE PERITONEUM AFTER OPERATION.—At the Congress of the American Association of Obstetricans and Gynæcologists, recently held at Toronto, *Med. News*, Dr. Morris, of New York, stated that he had been experimenting with a view to determine the reason for the cure of tuberculosis of the peritoneum after operation, it being a well-known fact that more that 80 per cent. of these cases recover as a result of simply exposing the peritoneal cavity to the air. The author collected fluid from the abdominal cavity of patients with tuberculosis of the peritoneum, placed it in an incubator for forty-eight hours, and developed the bacteria of putrefaction which would ordinarily enter in such fluid exposed to the air. From this fluid Eiloart then isolated a toxalbumin, the product of the growth of putrefactive bacteria in this peritoneal fluid. The toxalbumin employed to destroy tubercle bacilli in culture tubes destroyed them very promptly. A control experiment, which was not yet completed, was in progress for determining if these bacteria were absolutely dead. However, enough had been proved to show that tuberculosis of the peritoneum recovers after operation because putrefactive bacteria produce a toxalbumin in the fluid which is fatal to tubercle bacilli in the peritoneum. The reason why it is more effective in curing cases of tuberculosis of the peritoneum than tuberculosis of the knee-joint is because the anatomy of the peritoneum is such that any toxic agent absorbed by the lymphatics of the peritoneum is brought into close contact with the entire structure; whereas, in the knee-joint, the lymphatics are fewer and with more definite channels.

THE EFFECT OF ERYSIPELAS ON MALIGNANT GROWTHS.—For many months the medical journals have been occupied to a considerable extent with reports of the treatment of malignant growths by the use of toxic products of erysipelas. It has long been known that intercurrent attacks of erysipelas have a peculiar effect upon malignant growths, while properly conducted experiments with its toxines, are of quite recent date. A careful and systematic investigation is now in progress, and, so far as reported, the investigation seems to show that erysipelas has an antagonistic influence on malignant growths. Dr. Coley, of New York, is pursuing the investigation with great vigor, and is from time to time reporting results that are unquestionably favorable. He has experimented with both sarcoma and carcinoma, and seems to have had favorable results in both. In some of his cases he has injected the

toxic products of erysipelas alone; in other cases he has combined it with the toxines of the bacillus prodigiosus, which he thinks gives some better results, and seems to increase the effects of the erysipelas toxines. Dr. Coley has reported in all nearly one hundred cases thus far treated. Other observers are reporting favorable results along the same line. Many of the cases were inoperable ones; therefore, if this new process of inoculation with pure cultures of the streptococcus of erpsipelas proves to be what is reported of it, another great advancement will have been made in the medical profession. European investigators are busily engrged in the same kind of investigations and give likewise the same results.

A New Gas.—The discovery of a new gas, or it may be element, is one of great interest. The discovery was communicated about the middle of August, to the Chemical Section of the British Association at Oxford, by Lord Raleigh, *Med. Press.* He announced the discovery of a hitherto unknown constituent of the atmosphere, which he described as a gas characterized by extreme inertness. After he had commenced his investigations, he had been joined by Professor Ramsay, but they have not been able to distinguish the new body by any specific chemical reactions. The density of the substance, of which they had obtained about 100 cc., was 19·09. For the present they have adopted the term "gas" in describing the new constituent, and did not commit themselves to the word "element." As may be imagined, their announcement has excited a good deal of attention amongst the chemists. Notice was first called to this substance by the fact that the density of nitrogen obtained from atmospheric air differed by about half per cent. from the density of nitrogen obtained from other sources. It was found that if air be subjected to electric sparks, the resulting nitrous fumes absorbed by potash, and the excess of oxygen by alkaline pyrogallate, there remains a residue which is neither oxygen or hydrogen, as can be seen from its spectrum. The newly-discovered substance constitutes 1 per cent. of the atmosphere, and gives a spectrum with a single blue line much more intense than a corresponding line in the nitrogen spectrum.

Glycerine Suppositories Instead of the Glycerine Tampon.—Dr. T. Graham in the *Med. Rec.*, speaks of the advantages of the suppository over the ordinary tampon. He makes each suppository to contain, besides the glycerine, one or two grains each of alum and thymol, and keeps it in place by a pledget of cotton wool. He says the advantages are: 1. Easy application, as it does not require the use of the speculum to place it. 2. Its greater and more prolonged effect on the parts to which it is applied, its action extending over a period of at least thirty-six hours. 3. It can be used in the treatment of the virgin without the use of the speculum, and this I consider its chief merit. I have never been able to understand why a virgin should not be treated locally for uterine disease, if she need treatment, as well as her married sister. Of course she need not be mutilated or abused, but if there were more sense and less sentiment used in treating the virgin for uterine disease there would be fewer married women with chronic utero-mania to wear out the patience of both the husband and the doctor. The glycerine suppository can be inserted into the vagina of the virgin without a speculum and will remain in place without the pledget of wool; or if it seem best the patient can be taught to apply it herself, and thus be saved from the trying ordeal of an examination so graphically described by writers on Gynecology whose practice is not seldom contrary to their published statements.

Hepatic Colic without Gall-Stones.—Lépine, *Intern. klin. Rundschau; Med. News*, contends that hepatic colic may result from simple spasmodic contraction of the gall-bladder or biliary ducts. This opinion is based on both clinical, pathologico-anatomic, and experimental evidence. From the clinical point of view reference is made to the hepatic colic observed in hysterical individuals as a result of emotion, without discoverable cause in the intestinal evacuations. In some individuals the ingestion of certain articles of food is followed by hepatic colic. A case is cited in which after death no concretions were found in the choledoch duct, although a few small grains were present, together with active contraction of the walls of the duct. In dogs spasmodic contraction of the lower portion of the choledoch duct may be induced artificially. It is maintained

that contraction of the biliary canals may be induced reflexly.

FOUR USEFUL PRESCRIPTIONS.—

"*C. C.*" *Cough Mixture.*—The following mixture is said, *N. Y. Med. Jour.*, to be largely used in the Philadelphia Hospital:

℞—Codein sulphate, ... gr. ½.
Dilute hydrocyanic acid, . . ♏ ij.
Spirits of chloroform, . . . ♏ xv.
Mucilage of acacia, ... ♏ xv.
Syrup of wild cherry, . ad. . ℥ j.

Tympanites, Med. Press and Circular:

℞—Ol. terebinthinæ, ... ℥ j.
Ol. amygdalæ dulc, ... ℥ ss.
Tr. opii, ... ℨ ij.
Mucil. acaciæ, ... ℥ v.
Aq. laurocerasi, ... ℥ ss.
S.—A teaspoonful every 3 to 6 hours.

Flatulence.—Hartshorne, *Ibid.*, prescribes:

℞—Olei cajuputi, ... ℥ ss.
Tinct. lavand. co., ... ℥ ss.
Mucil. acaciæ, . ad. . . . . ℥ ij.
S.—Dessertspoonful when necessary.

Diarrhœa in Infants.—Rothe, *Ibid.*, uses:

℞—Acidi carbolici, ... grs. ij.
Bismuthi subnitratis, . . . ℥ j.
Syr. acaciæ, ... ℥ ss.
Aq. meth. pip., . ad. . . . ℥ ij.
S.—A half teaspoonful every 3 to 4 hours.

HYDROGEN PEROXIDE IN BLEPHARITIS MARGINALIS.—Dr. Ayres, of Cincinnati, has recently, in the *Med. News*, called attention to the treatment of marginal blepharitis with peroxide of hydrogen. After first correcting unhygienic conditions at home, and errors of refraction if they exist, he softens the crusts on the edges of the lids with warm water, and scrapes them off. A little absorbent cotton is then wound around a Japanese toothpic, dipped into the solution of peroxide, which has been poured into a little dish, and applied to the entire length of the lid margin. The application is continued until the characteristic bubbling ceases. The ulcers will then present a whitish appearance, as if they had been treated with silver nitrate. This treatment should be repeated every day. The doctor reports the happiest results from this method.

EPISTAXIS. — Prof. J. Hutchinson has stated, *Am. Pract. and News*, that epistaxis may be invariably arrested in a short time by placing the hands and the feet of the patient in water as hot as can be borne. In a recent discussion on the subject of epistaxis, it was divided into three varieties—juvenile, hereditary, and hereditary hepatic, and it was thought that the effect is nearly always due in childhood of latent or unnoticed disease of the liver. In the adult the hemophile form is generally associated with arthritism, and especially with the lesions of the liver caused by arthritic disease. Instead of tonics and milk diet so often prescribed, and so injurious to the liver, the speaker said alkaline and vegetable diet, with general and local douches, should be ordered. In elderly subjects arterial lesions were considered to be the chief cause.

RESOLUTION OF CONDOLENCE. — At a meeting of the medical profession of Belleville, the following resolutions were carried:

1. *Resolved*,—That we deeply regret the death of Dr. Hope, one of our oldest and most esteemed confrères, and whose sterling integrity, dignified deportment, unfailing professional courtesy and constant devotion to duty endeared him to us all.

2. *Resolved*,—That in tendering our profound sympathy to his widow and family, we trust their grief will be mitigated by the reflection that his was a useful and exemplary life.

3. *Resolved*,—That a copy of these resolutions be forwarded to Mrs. Hope.

Signed on behalf of the medical profession of Belleville,

JOHN J. FARLEY,
W. YOUKER,
W. J. GIBSON,
R. TRACY.

A LAY VIEW.—The following is from the *Philadelphia Record*: "Out of the forty-four States in the Union there are only sixteen in which a medical diploma of itself is no license to practice, and in which a State examination is required before legal permission to practice may be obtained. These sixteen States are Alabama, Arkansas, Florida, Maryland, Minnesota, Mississippi, New Jersey, New York, North Carolina, North Dakota, Pennsylvania, South Dakota, Texas, Utah, Virginia, and Washington. The ease with which bogus diplomas may be obtained in this and other

countries, and the alarming prevalence and persistency of quackery, should awaken the legistatures of all the derelict commonwealths to the necessity for State supervision. Life ought not to be put in jeopardy through the ignorance of practitioners who are paid to cure, but who often blindly assist in swelling the death-rate.

PAPAIN FOR TAPE-WORM.—Tape-worm is not very common in this country, but it is extremely difficult to cure. Dr. Roberts Bartholow refers to a case in the *Medical News*, in which the patient had used unsuccessfully turpentine, naphthalin, pumpkin seeds, pomegranate root, pelletierin and croton oil. He then tried papain, taking ten grains three times a day after meals. As a result he passed several segments and finally the whole worm, head and all. It was highly probable that the papain exerted a toxic action on the worm, causing it to relax its hold on the mucous membrane. Papain is a ferment contained in the juice of the carica papaya, and as it is neither a poison nor an irritant, it may be used freely in such cases.

WE MUST LEARN TO MILK THE GOOSE.—Fifteen cases of chronic urethral discharge dependent on the retention of the seminal fluid in the vesicles are reported as cured by Dr. Eugene Fuller's massage treatment or stripping of the seminal vesicles, *Jour. of Cutaneous and Genito-Urinary Diseases*. This method is to insert the greased forefinger into the rectum and stroke the seminal vesicles. This stripping process forces out the retained semen. Repeating the treatment once a week he claims to accomplish very happy results in relieving the chronic urethral discharges dependent on vesiculitis.

ETHER SUBCUTANEOUSLY IN SCIATICA. — Dr. Chindamo, *Memorabilien*, has treated a number of cases of sciatica, even including some very obstinate ones, which were rebellious to all other measures, with hypodermic injections of sulphuric ether. The drug is injected daily, in doses of 1 to 2 syringefuls, with cures in four to seven days. The remedy is injected into the painful points (of Valleix), beginning with the highest and proceeding gradually downwards.

TREATMENT OF CHANCRE.—Dr. Willard Parker Worster says, *Jour. Cut. and Genito. Urin. Dis.*, that chancre is cured in the shortest possible time by the use of peroxide of hydrogen without pain or detention from busines. The sore is sprayed with peroxide under sixty pounds pressure and dressed with iodol powder, the same treatment being repeated. All the chancres reported were not by any means innocent, as some presented unmistakable signs of phageadena. The showing made by the author is certainly remarkable and worthy of trial.

THE ALMIGHTY'S TREATMENT OF NERVOUS DEBILITY.—When Elijah was utterly depressed in mind, says *The Independent*, and believed that his brave attempt to create a reformation in Israel had completely failed, and that there was nobody left that cared for the true God, and was ready to die of a broken heart, then God gave him a quiet desert far from distraction, then a good sleep, then a comfortable meal, then sleep again, then more food, and then a six weeks' vacation. After that he recovered his spirits and was greatly improved in his religious feeling, his faith in God, as well as in bodily condition. One's religious moods may often depend on the condition of the body, if not one's religious life.

FOR PAIN IN THE EYES.—Heretofore there have been but few remedies from which we could choose in prescribing for the relief of pain in the eyes. Now, however, Dr. D. H. Howell, Editor of the *Southern Medical Record*, has given us a new remedy, which promises to be of the greatest value in these cases. Dr. Howell says he has been a great sufferer for two or three months, with the most intense pain in his eyes. "At last I thought I would try Antikamnia. I was relieved in less than two hours. I now carry it in my pocket all the time."

AN APPLICATION FOR TOOTHACHE, NEURALGIA, RHEUMATISM, ETC.—The following, *Coll. and Clin. Rec*, is an excellent application for local pain, as of toothache, neuralgia, rheumatism, etc. :

℞—Menthol, Chloral, Camphor, āā . . . . . grs. x.

Mix until liquefaction occurs.

Sig.—Apply locally.

CHANGE OF STAFF.—We understand that Drs. Atherton, Burns, Ryerson, McDonald, Ferguson, and Aikins are no longer on the editorial staff of the *Dominion Medical Journal.*

Books and Pamphlets.

TREATMENT OF THE DISEASES OF THE STOMACH AND INTESTINES. By Dr. Albert Mathieu, Physician to the Hospital of Paris. Octavo, 402. Price, parchment muslin, $2.50; flexible leather, gilt top, $3.25. New York: William Wood & Co. Toronto: Carveth & Co. 1894.

Dr. Mathieu's reputation as an investigator and his experience in connection with the administration of the Paris Hospital have given this work a wide circulation on the continent, where it is considered the best, as it is the latest, treatise upon the subject. The author's standing in the profession gives it an authority that is most welcome in a class of diseases about which so much has been written and so little said. The divisions of the work are, first, diagnostic technique; second, general considerations on diet, and, third, treatment of the principal clinical forms of dyspepsia and of the most common symptoms of gastro-intestinal diseases.

Either of the divisions is well-worth the price of the whole book. There is, we think, and we are led to think so from experience, both personal and from consultations and conversations with others of our profession, much haziness, in the average medical mind upon the subject of indigestion, whether stomachic or intestinal. Late investigations in regard to the chemistry of the stomach have led to real advance in a knowledge thereof; and a more general knowledge of the action of ptomaines absorbed into the blood from the intestinal tract, leading to auto-intoxications, has done much to relegate pure empiricism out of a considerable portion of the field it once occupied in the treatment of dyspepsia.

Time and space will not permit an extended notice of this excellent work. We must content ourselves by saying that it is the most practical, as well as scientific, work we have yet seen on the subject.

MENTAL DISEASES. By Daniel Clark, M. D., Medical Superintendent of the Asylum for the Insane, Toronto, Extra Mural Professor of Medical Psychology in the University of Toronto, etc. Toronto: Wm. Briggs. 1894.

The above is a synopsis of twelve lectures delivered in the hospital for the Insane, Toronto, to the graduating medical classes. It is intended as an introduction to the study of mental diseases, and designed for the senior medical student and busy physician, who have not time at their disposal for the study of larger and more exhaustive treatises. The work is essentially practical, long dissertations and involved arguments on matters of hypothesis, and as such, of secondary importance to the practising physician, have been wisely omitted.

The work is timely, or, to speak more correctly, such a work should have been *en evidence* years ago. It will prove a boon to both student and doctor. We have enjoyed reading it. Much information vaguely put down in other and more pretentious works on the subject, is here crystallised and put into a tangible and useful form. The work should have a large sale.

THE POCKET ANATOMIST. By C. Henri Leonard, A.M., M.D., Prof. of Gynæcology Detroit College of Medicine. Leather, 300 pages, 193 illustrations, post-paid $1. Detroit, Mich: *The Illustrated Medical Journal* Co. Publishers, Toronto: Carveth & Co.

The eighteenth edition of this popular anatomy is now before us; it is printed upon thin paper and bound in flexible leather so as to be specially handy for the pocket. The illustrations are photo-engraved from the English edition of Gray's Anatomy, so are exact as to their details. Three large editions have been sold in England, testifying to its popularity there, and some sixteen thousand copies have been sold in this country. It briefly describes each artery, vein, nerve, muscle and bone, besides the several special organs of the body. It contains more illustrations than any of the other small anatomies. The one mistake made is, we think, printing on too thin paper, which in this edition makes the letter press and engravings somewhat indistinct. The idea, of course, is to lessen the bulk and weight of the volume, which object has been successfully accomplished.

THE CANADA LANCET,

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

The LANCET has the Largest Circulation of any Medical Journal in Canada.

Original Communications.

THORACIC PHENOMENA OF INFLUENZA.*

BY W. J. GREIG, B.A., M.D., L.R.C.P. ENG., TORONTO.

In the early part of 1892, Pfeiffer, an assistant in Koch's laboratory in Berlin, discovered and described a bacillus which he claimed was the causative agent in influenza. Almost simultaneously the same organism was described by Kitasato and by Canon. A few months later, Klein of England, in a communication to the Government Board, corroborated the statements made by Pfeiffer and added that he had also found the bacillus in the blood. Not only had they found the bacillus in every case of influenza examined, but they had been able to produce the disease in susceptible animals, especially monkeys. Injections of cultures into the lungs through the thoracic walls, as well as inoculation on the nasal mucus membrane, produced attacks of the disease. The next communication of importance on the subject was by Drs. Parsons and Klein, in a Government Health report, referred to in the *Lancet* of August, 1893. Dr. Klein states that he only discovered the bacillus in the blood in a very few cases and adds in italics, "that any bacilli of influenza that may gain access to the circulation lose their vitality and are present in the blood only as dead bacilli."

The report continuing, advocates caution in accepting this organism as the specific bacillus of influenza, on the ground that sufficient time has not yet elapsed to ascertain whether it can be found in any other disease or not.

Prof. Koch laid down three postulates which in his opinion any organism must conform to, before it can be recognized as the causative agent in any particular disease. These were:

1st. The organism can be found in all cases of the disease.

2nd. It cannot be found excepting in this disease.

3rd. With pure cultures, the disease can be produced experimentally in susceptible animals.

So far then the organism described by Pfeiffer fulfils the requirements of the 1st and 3rd postulate, but more time is necessary before the 2nd or negative postulate can be proved.

The bacillus in question is small, not so large as that of mouse septicæmia, two or three times longer than broad, and staining with difficulty. It was found in enormous numbers in the sputa, the number varying with the degree of fever, the higher the fever the more bacilli. They were also found in the pus cells of the sputa. They could be cultivated freely in blood at the temperature of the body and were affected by changes in temperature and by drying.

Almost every disease to which the thoracic organs are liable may be set up, or, if already present, may be intensified, by the action of the influenzal poison. Bronchitis, lobar and lobular pneumonia, phthisis, abscess and gangrene, asthma, pleurisy in its different aspects, endocarditis, pericarditis, neuralgia, weak heart, and functional disturbance so called. This list is so extensive that I cannot pretend to discuss them all, but will attempt to deal with those of most frequent occurrence.

And first, a few words as to diagnosis. When are we justified in calling any disease of the thorax influenzal in character?

1st. When the disease is epidemic there should be no difficulty in recognizing the condition, although I fear the mistake is sometimes made of calling everything influenzal. But sporadic cases occur after the epidemic has died out, which may be difficult to recognize.

2nd. When the sickness is introduced by an attack of those well-known nervous muscular pains, such as intense headache, backache and general soreness.

3rd. If the thoracic disease is accompanied or followed by a prostration out of proportion to the amount of local disease present, we would be safer to call it influenzal in character.

*Read before the Ont. Med. Association, June, 1894.

Of the catarrhal processes which form a part of influenza, bronchitis is the most common. It usually commences as an ordinary bronchitis, but rapidly advances to the small tubes, when serious symptoms are set up, especially in the weakly and in the aged. The expectoration is often scanty, but may become copious. It is always sticky and tenacious and difficult to raise. All sorts of râles may be heard in the chest, and some writers have advanced the theory that many of these sounds are reflex and of central nervous origin. The tendency of the disease is to attack the small tubes, setting up a capillary bronchitis, which is soon followed by atelectasis and lobular pneumonia.

A writer in the *British Medical Journal* makes the statement that the bronchitis is more apt to attack the right than the left lung, and that the left lung may escape altogether. His theory is that the bronchitis is due to aspiration of the influenzal bacillus, and that the right lung is preferred because the right bronchus is larger and more horizontal.

Broncho-pneumonia is a very common complication of the disease following capillary bronchitis. Osler states that capillary bronchitis rarely exists apart from lobular pneumonia. So much is this considered the case that recent text-books on medicine do not describe capillary bronchitis as a separate affection. I have no doubt but that in this fact is to be found the explanation of many of those cases of bronchitis which are so rebellious to treatment. It also explains why the constitutional disturbance and the depression are out of proportion to the local condition apparently present. There is nothing peculiar about the broncho-pneumonia following influenza, and nothing more need be said about it at present.

Congestion and Lobar Pneumonia.—An acute localized pulmonary congestion has been described following influenza. French writers have a great deal to say about acute pulmonary congestion. English writers doubt its occurrence. However, after influenza there does occur a peculiar localized condition which may be difficult to classify. I well remember a case in my own practice in which at the posterior base of the left lung there was dulness on percussion, intensified voice sounds with indistinct tubular breathing, but neither rusty expectoration, crepitant râle or severe constitutional symptoms. Even after his recovery I was uncertain whether I had to deal with a localized congestion or a pneumonic consolidation. Perhaps the best evidence of the existence of these congestions is the fact that free action on the bowels will improve the physical signs. Out of the *post-mortem* room I doubt the possibility of distinguishing between a localized congestion and an anomalous or atypical pneumonia, in which form the latter disease is often introduced to our notice after influenza. Allow me to state more explicitly what I mean by anomalous or atypical. I mean a pneumonia which has indefinite symptoms, which is slow and insidious in onset, and which does not run a normal course. There may be no chill, no vomiting, no rusty expectoration, no crepitant râle, little or no cough, no increase in fever or in respirations, no alteration in the pulse-respiration ratio. The temperature may be very aberrant. It may run up very high, perhaps to 106° F, drop to a low point, and then run up again in the same day. Dyspnœa and cyanosis may be marked, but are due rather to the associated bronchitis than to the pneumonia. But physical examination will show dulness on percussion, tubular breathing and bronchophony. In fact there will be marked disproportion between general symptoms and physical signs. The character of the pneumonia is modified by the poison of influenza, and a marked feature of the average case is asthenia.

That pneumonia is one of the most frequent complications is well known. I have seen several statistical tables from some European and American hospitals, and they show conclusively that the number of cases occurring during the influenza epidemic was almost double compared with the number of cases during the corresponding periods of other years. I wish to emphasize the fact that pneumonia is a complication, not a part of the disease as bronchitis is, and therefore avoidable in many cases. The usual cause assigned for the increase of this complication is that patients resume their ordinary mode of life too soon after the influenza, forgetful or careless of the devitalization following the disease. This, of course, is an avoidable cause, but there is something more in it. To produce an attack of pneumonia, two things are necessary: 1st, the presence in the tissues of Frænkels' pneumococcus, which has

been found by Netter in the buccal secretions of 20% of men in perfect health. So that this agent is very likely to be present. 2nd. Any devitalizing or debilitating cause, such as a chill, exhaustion, or the prostration following an acute illness. Therefore, it is clearly seen in what way influenza is a direct predisposing cause of lobar pneumonia. Many may think that with a patient in bed or in a warm room there is no danger of any complication. You would naturally think that in typhoid during the 2nd or 3rd week there was little danger of pneumonia, but the authorities state that it occurs in from 8% to 10% of all cases. In exactly the same way, pneumonia may occur after influenza, and may be so slow and insidious in development, and so atypical in character, that unless sought for may be overlooked. You may ask whether a pneumonia coming on in this way can be avoided or not. It can just so far as you can combat the debility. In treating the acute stage avoid the coal-tar products, or, if necessary to use them, give stimulants also. And, after the acute stage is past, give tonics and stimulants, quinine, iron, nux vomica or its alkaloid, caffein, ammonia, ether, etc. Avoid everything that can possibly depress.

Tuberculosis.—I have not much to say on this subject. In the dreadful depression which we have all seen so often and perhaps felt, the tubercular diathesis, if present, is very apt to assert itself. A suitable soil is provided for the growth of the bacillus of tuberculosis. I find that the journals contain reports of numerous cases of phthsis developing after influenza. I. W. Irwin, in the *American Practitioner and News*, reports six cases developing in patients, with a family tendency thereto. Patients already suffering from the disease are hurried on towards an earlier grave.

In a case of my own, in which in the early part of the winter the tubercular process in the lung appeared to be at a standstill and the condition of the patient otherwise improving also, I had hoped for a permanent improvement, with, perhaps, years of good health. Unfortunately in January of this year, she developed a very severe, acute attack of influenza. When I saw her, after she had been sick for a week, I found her terribly prostrated with a weak, irregular and intermittent pulse. The tubercular processs which had been limited to the upper half of the right lung, extended rapidly after this involving the balance of the right lung, and shortly after the process showed itself in the apex and at the base of the left.

Affections of the Heart and Pericardium.—With regard to inflammatory diseases of the heart I have very little to say, beyond noting the fact that cases of endocarditis and pericarditis have been reported following influenza. Dr. Burney Yeo has reported a case in which he watched the development of an aortic regurgitant murmur after influenza. When we enter the field of functional heart disease we are in deep water. The term neurosis has been applied to these cases lately and I believe that it is a much better term. All sorts of cases have been described in the journals. Here is a short list: brachycardia, tachycardia, arrhythmia, neuralgia, weak heart, collapse, acute dilatation with pulmonary congestion.

I desire to read to you a report of four very unusual cases which have been carefully described in the journals. In the *British Medical Journal*, 1892, Dr. Yeo reports the following. "A young man was suddenly attacked with dyspnœa, and palpitation with irregular heart and pulse. This was soon followed by anasarca, albuminuria, hepatic enlargement, and pleural effusion. His condition otherwise was good. No pain, no fever, regular bowels and good appetite; no valvular lesion. All his symptoms were due to a rapidly produced, acute cardiac asthenia with dilatation. The only possible cause that could be ascertained was an attack of influenza six months previously, during which he was laid up for three days with an acute pain in the back. Dr. Yeo offers in explanation of the symptoms, an infection of some sort, an affection of the coronary arteries, or a nerve lesion."

Dr. West, Assistant Physician to St. Bartholomew's, before the London Harveian Society describes the following case, *Lancet*, 1894: "A man of good physique, in middle age, had a temperature of 103° F. for two days, after which it became normal, and was associated from the first with attacks of collapse. These would come on without any warning; the patient would turn pale, could speak only in a whisper, and felt as if he were falling through the bed; pulse barely perceptible at the wrist and quite regular. In fifteen or twenty minutes he would be all right.

These attacks occurred three or four times daily during the fever, gradually became less frequent and severe, but did not entirely disappear until the post-febrile depression had passed off and the temperature had risen again to normal. In this patient the attack of influenza was otherwise mild." Dr. West continuing says, "That these cases of collapse occurred so frequently with him that he found himself unconsciously speaking of the collapsing form of influenza."

In the *British Medical Journal*, 1892, Dr. St. Clair Thompson, M.R.C.P., London, reports three cases of what he calls cardiac neuralgia, one of which proved fatal I quote particulars of this case: "Stout gentleman, æt. 39 years, took little exercise, and smoked on an average ten cigars a day, had apparently recovered completely from an attack of influenza. Eight days afterwards he had a business meeting at his house at which he smoked, drank and had a good dinner. Next morning he suffered from an attack of flatulence and vomiting, with a constant wearing pain midway between the nipple and the shoulder. Pulse 90, soft, regular and compressible. During the day the heart pain diminished without ceasing entirely, and the patient was well enough to be out of bed. At midnight the pulse was 88 and regular; an hour later, on raising his head to swallow a pill, he suddenly fell back dead. There was no autopsy."

Dr. Thompson refers to two other cases very similar in character, but not fatal. These cases differed from true angina in the absence of evidence of arterial or cardiac disease. His opinion was that the symptoms were due to the effect of the influenzal poison on the cardiac nerves.

In the *International Medical Magazine* for January, 1893, the following case is reported by Dr. J. H. Platt, of Lakewood, New Jersey: "A young woman, æt. 25 years, had been under the Dr's. care for several years for heart symptoms, associated with a mitral regurgitant murmur. In December, 1891, she had an attack of influenza, after which lobular pneumonia developed. Her convalescence was slow, associated with great prostration and with attacks of collapse. On the evening of January 11th, at 7.45 p.m., the pulse was 102, weak and small. Fifteen minutes later, the pulse was 58, larger but weak and soft. Collapse occurred an hour after. The pulse remained at 52 for eighteen hours when it suddenly changed to 104. Later in the day it was 96, and at 5 p.m., suddenly changed to 48. This interchangeable pulse continued for eleven days, and on several occasions the Dr. with his finger on the pulse observed the change taking place. It would occur in this wise: the pulse being 100 to the minute and regular, a beat would drop out, then after a few beats another, and after a shorter interval a third and so on, at lessening intervals until under the finger a regular pulse was felt of 50, larger and softer than the former. After a time the process would be reversed and the frequency doubled. The heart sounds corresponded with the pulse beats. Finally complete recovery took place."

I believe that Drs. McMahon and Graham of this city, saw a case in which the same phenomena occurred.

A study of these four cases, so widely different from each other in symptoms, gives us the best idea of the complex conditions produced in the heart by the influenzal poison.

How can we explain this diversity? What is the pathology of these cases? I regret to say, that of absolute knowledge we have none. We can argue from our general medical knowledge that such a complexity of symptoms can be produced only by septic causes. Under these circumstances we may obtain ideas as to causation and its mode of action by analogical reasoning from a disease of a similar nature, such as diphtheria. Of course such a method of reasoning holds good only on the assumption that influenza is a disease of bacterial origin, which there is good reason to believe.

You are aware that from the specific germ of diphtheria a tox-albumin has been separated. When this is injected into susceptible animals, it produces paralysis, nephritis and albuminuria. In other words the sequelæ of the diseases are produced. And, in addition, the same pathological changes are found on *post-mortem* examination. Every change described by Oertel, in human diphtheria, is paralleled in the disease produced in animals by the injection of this tox-albumin. The arteries may be altered in character, the capillaries may show extensive hyaline degeneration and necrotic areas in deep-seated organs may be produced.

Assuming then, that influenza is a bacterial disease, of which there is substantial evidence; assuming also, that the symptoms and many of the sequelæ are nervous in origin, which is a widely accepted opinion; assuming also, that the influenzal bacteria do produce a poisonous albumin, as other bacteria do; are we not justified in concluding by analogy from diphtheria, that the symptoms and many of the sequelæ are produced by the circulation in the tissues of a tox-albumin. Further, that the effects, sedative in some cases, irritant in others, sometimes to the extent of producing a neuritis, are produced by the action of this poison on the nerves and nerve centres, with a preference for the pulmonary, gastric and cardiac branches of the pneumogastric. In the case of the heart, the action may be on the circulatory centre in the medulla, on the inhibitory or accelerator fibres of the pneumogastric, on the cardiac plexus or on the ganglia in the heart substance. The result of the poison's action may be as in the case of diphtheria, to produce degeneration of the coronary arteries with consequent mal-nutrition of the heart substance, or to produce areas of necrosis in the walls of the heart or on the endocardium.

Such, Mr. President, is I believe a workable hypothesis of the disease. Such is the only hypothesis, correct or not, which on our present knowledge, we are justified in making. It furnishes a basis for treatment, which if kept in view will produce an intelligent and perhaps a more careful treatment.

APPENDICITIS AND ITS SURGICAL TREATMENT.

BY GEO. A. BINGHAM, M. B.

Surgeon to the Out-door department Toronto General Hospital, Surgeon to the Victoria Hospital for Sick Children, etc.

There has been some unnecessary confusion as to the term to be employed in describing this affection. Typhlitis, perityphlitis, paratyphlitis and appendicitis are words that have been used in a somewhat indiscriminate manner so as to convey to the minds, of some at least, of the profession, that these diseases are separate and distinct entities, incidentally attacking the right iliac region. This classification is very apt to confuse the mind as to the pathological condition underlying a given case. The multiplication of terms is also unfortunate in that it is clinically incorrect. Acute inflammation confined wholly to the cæcum probably never occurs. The appendix would soon become involved as well as the surrounding peritoneum, and it would be then that we would have presented the clinical phenomena of the disease. As to perityphlitis, this is a local peritonitis, secondary to the inflammatory process in the cæcum or appendix, with or without suppuration; it therefore should never be used to designate the primary disease.

The term paratyphlitis I apprehend is simply a reminiscence of the time (not long past), when the anatomy of the part was not well understood, and when the appendix was supposed to lie behind the peritoneum, and it was thought that inflammation of the viscus was liable to invade directly the retroperitoneal tissue. There is no longer, I believe, any doubt that the appendix is normally wholly surrounded by peritoneum, and that disease of the organ is at first entirely intraperitoneal and cannot very readily at all events reach the extraperitoneal cellular tissue. In preferring the term appendicitis I am guided also by the statistics at our disposal. Without citing more extensively, I may remind you that in 18000 cases of this iliac disease reported from Germany, 91 per cent. showed decidedly that the appendix was the origin of the trouble. Anyone may readily verify the same from English or American figures.

The question of surgical interference in appendicitis is still being very ardently canvassed on this continent, some going so far as to say that a justifiable operation is a rare contingency; others maintaining that all such cases should be handed over to the surgeon within twenty-four hours of their development.

Both of these contentions are extreme, and yet either might be justified by a limited observation of cases. The disease varies within a very wide area as to its severity, or, perhaps, I should rather say to its course. There are no doubt cases which run a mild course, recover without incident under medical treatment, and do not tend to recur as the result of any surviving leision. Others progress rapidly to suppuration, perforation, perhaps general peritonitis and death. Still a third class of cases though apparently recovering under

medical treatment, yet tend to recur again and again until the patient succumbs to an attack more serious than its predecessors. If then we could be enabled to establish a diagnosis in these different forms of disease at a reasonablly early period, we would certainly be possessed of important data for our guidance in the future conduct of the case. Let us then for a moment look at some of the pathological conditions underlying the different forms of the disease to which I have referred, and the more prominent symptoms resulting therefrom.

The first form of the disease, namely, that comparatively mild variety which tends toward uninterrupted recovery under medical treatment, is probably in the vast majority of cases associated with accumulated masses of hardened fæces in the cæcum as the primary causative factor. These should never be looked upon as cases of appendicitis, but I wish to include them here (1) because I believe they are not infrequently so diagnosed and (2) because such a cause may give rise to true inflammation of the mucous membrane of the appendix, which, once the cause is removed readily recovers without ulceration. Outside the symptoms of this condition there are at least two reasons for this conclusion both necessarily of a negative nature. (1) Statistics show that in nearly every instance when an operation has been deemed necessary the appendix has been found to be involved rather than the cæcum. (2) If in these mild cases the appendix be the part primarily involved (through the effect of fæcal accretion or foreign body lodged therein) then it is a mystery to me how merely medical treatment can so readily effect a cure. Remember the muscular coat of the appendix is but poorly developed, and the tendency of a foreign body lodged within the process would always be toward ulceration and perforation, and not removed by the natural opening into the cæcum by vermicular action.

Granting then that the cæcum is the seat of trouble in these milder cases, what symptoms would we expect to accompany such leison? A large, irregular, somewhat ovid tumor in the right iliac region, usually not well defined by rectal touch, doughly in feel rather than hard, present from the outset of the disease with no distinct *point* of tenderness but a tender area of considerable dimensions; pain and temperature not so extreme as in true appendicitis, and the former not so liable to radiate to other points; a history of constipation and scibilous fæces, and usually of some grave indiscretion of diet. This class of cases may be confidently left in the hands of the physician.

There is another cause that may sometimes underlie these easily cured cases, viz., the sudden twisting or bending of the process upon itself owing to the movements of the cæcum. This may produce a slight inflammation of the partially occluded appendix, which may subside in a short time without involving the serous covering, the appendix having righted itself again under the influence of a saline. These attacks are very sudden in onset and subsidence, the pain is colicky, and there is no evidence of tumor.

The second class of cases to which I have referred, presents a very different problem for solution. Here the progress of the disease is toward suppuration. The cause of this condition is usually the lodgement of an enterolith or a foreign body in the appendix with occasional cases (which we shall not now consider) resulting from extension of the typhoid or tuberculous ulceration in the neighboring intestine. Such a case is frequently ushered in by a rigor followed by high temperature; a point of maximum tenderness may be early localized; the pain is sharp and radiating to thigh, testicle or bladder; the tumor appears later in the disease; when deeply located may usually be outlined per rectum, is oblong and indurated, later becoming softer, and follows the course of the appendix. Vomiting is often a distressing symptom, and later the indications of pus formation present themselves. No history of constipation is necessarily made out. While these symptoms appear to the mind as the logical sequence of the pathological conditions underlying this form of disease, and while clinically they are in many cases quite sufficiently obvious to be conclusive, yet I cannot too strongly urge the fact that some cases of perforative appendicitis begin and progress most insidiously, and that the attendant should be unwavering in his watchfulness of all local and constitutional conditions, and be prepared at all times for immediate operation.

In this form of disease surgical interference is of course called for. The two debatable questions are, (1) When; (2) How to operate.

In answer to the first of these questions many American surgeons have urged the operation at the earliest possible moment after the diagnosis of the appendicitis is even reasonably clear; while the more conservative practice in European countries has been to wait until the presence of pus has been defined. In this country the latter method is, I believe, generally favored. Arguments may be advanced in favor of both views, but as my paper threatens to become quite too long for your kind indulgence, I shall dismiss the early operation entirely (trusting to hear its advocacy in the discussion) and say just a word in defence of the later incision.

The great objection that has been urged against this method is the danger of perforation of the abscess into the general peritoneal cavity. Now the appendix being entirely surrounded by peritoneum the abscess is intra-peritoneal at first, but is shut off from the general cavity by inflammatory adhesions through which the pus must penetrate before invading the peritoneal cavity. I think experience will bear me out in saying that this is an incident not likely to occur earlier than the fourth or fifth day of the disease. Besides, this is not the only avenue of escape for the pus. It may, and has, burst into the bladder, the adjacent intestine, or through the anterior or posterior abdominal wall, and thus a spontaneous cure may result. Although this is not the most desirable termination of the disease, yet we should consider its possibility before resorting to the too early use of the knife.

I would also remind you of the difficulties in the way of making an absolutely certain diagnosis, and of the fact that appendicectomy is not a trifling operation to be lightly undertaken by the general practitioner. For these reasons, while the possible necessity of a very early operation in the more acute cases should not be lost sight of, it seems to me the preponderance of evidence is in favor of judicious and watchful delay.

In answer to the second question, viz.: how to operate, there is more unanimity. The incision should be over the cæcum, parallel with, and one and a half inches above, Poupart's ligament, three or four inches long, terminating externally to the deep epigastric artery. Should any evidence exist of adhesion to the anterior abdominal wall one extremity of the incision should enter the peritoneum outside the dull area, otherwise the bowel may be wounded. Indeed the whole incision may be made at a higher level if there be an extensive dull area. When the pus cavity is reached, infinite care should be taken to avoid breaking down adhesions. With this object in view, no rough handling of the parts should be indulged in for the purpose of finding the offending process. Should it be readily discovered, it may be ligated off close to the cæcum and removed. The abscess cavity should be carefully washed out, a drainage tube inserted and the wound closed. Liquid diet in small quantities. Bowels restrained for six days, then opened by enema.

Now, briefly in reference to the third class of cases, viz,: those of relapsing appendicitis. Here, too, the appendix is the offending member. It is true we do meet with recurring attacks of typhlitis due to accumulation of fæces in the cæcum, but each of these cases is in its nature primary, and obviously due to constipation or errors in diet, and the attacks do not tend to increase in severity. They are, in short, avoidable cases with a more or less distinct history as to cause. The pathological condition underlying true recurring appendicitis, however, is, as a rule, some abnormal position of the appendix. It has become twisted or bent upon itself and has become fixed in the position by adhesions, and its lumen has become either greatly narrowed or entirely shut off from the cavity of the cæcum. The natural secretion of its mucous membrane accumulates and distends the process, with the result of a local peritonitis, which gradually passes away only to recur on exposure to cold or slight injury, or even without any apparent cause. The attacks are apt to increase in severity until finally the patient dies or is obliged to consider himself a chronic invalid. Here there is little tendency to suppuration, and we may wait for complete subsidence of an attack before resorting to the use of the knife. The question as to how many attacks should qualify the patient for the operating table is a difficult one to answer. Each case must be decided upon its merits, and the patient himself must assist in the decision. Certainly, if he has had two or three attacks of increasing severity one should no longer hesitate. Then an incision of three inches in length may be made in the usual position and the appendix sought for. We must be prepared

for numerous adhesions and, perhaps, much confusion in the anatomy of the part. As a rule, the process will be found behind the cæcum pointing upward and toward the left, or else downward into the pelvis.

The more firm adhesions should be cut, not torn, large, flat sponges used to shut off the field of operation from the general cavity, and bleeding arrested at once, by ligature, if necessary. If the process have a mesentery it should be ligatured in sections and cut and the appendix removed after clamping close to the cæcum. The mucous membrane of the stump should be then drawn out and ligated, then carefully inverted into the cæcum. The remainder of the stump may then be buried by a few Lembert sutures taken in the adjacent wall of the cæcum and crossing the face of the stump, thus effectually covering it. The further protecting of this danger point by stitching to the site some loose portion of omentum or mesentery I have not tried.

I have not spoken of the difference between recurring appendicitis and the relapsing appendicitis described by French writers, because it must be often difficult to define and would not materially alter the treatment. Nor have I mentioned the differential diagnosis between appendicitis and other diseases in the locality, such as malignant disease of the ileo-cæcum. Here, at least, exploratory incision would be called for.

The following case may be of interest:

Mr. B., a young married man, æt. 28, has had numerous attacks of appendicitis, extending over a period of 12 months, These would come on suddenly with severe pain in the region of the appendix, followed by elevation of temperature, tenderness in McBurny's point and every indication of local peritonitis. The attacks would last for about a fortnight, during which the patient would be entirely unable to follow his business (that of a miller), and would be in bed most of the time. The attacks became worse and more frequent until the patient greatly dreaded their return, and began to look upon himself as little better than a chronic invalid. His physician, Dr. Niddrie, of Creemore, urged an operation for his relief. This was consented to, and the doctor asked me to go up and operate, which I did on the 12th of the last month. I found the patient otherwise in excellent health, but anxious for any operation that would relieve him from his enemy. As all symptoms of the last attack had subsided, I found indistinct evidence of tumor upon deep pressure over the appendix. Relying confidently upon the diagnostic acumen of the attending physician, I unhesitatingly complied with the wish of the patient and proceeded with the operation. The cæcum was adherent to the anterior wall, and the peritoneum was opened above and external to it when the adhesions could be readily separated. The appendix was found adherent throughout to the posterior wall of the cæcum, and doubled upon itself like the letter V, and considerably enlarged, the distal end especially so.

Yesterday the doctor wrote me as follows: "The temperature on the day following the operation reached 99·4°, on the second day, 100.2°, on the third, 99.1°, on the fourth, 99.1°, on the fifth, 99.3°, and on the sixth, 100.3°, after that normal. Diet for first four days, nothing but buttermilk and cracked ice, then allowed some chicken broth; at the end of a week allowed some fish, eggs, etc. Administered no sedative but morphia hypodermically. On the sixth day after the operation gave two enemeta of soap and water, followed two hours later by an enema of glycerine. This resulted in a copious evacuation, which entirely relieved the tympanites from which he had been suffering several hours prior to the enemeta. Removed the stitches ten days later. Wound perfectly healed. Patient feels splendidly."

Selected Articles.

INTRA-UTERINE MEDICATION.

Before the antiseptic era this treatment had been associated with various kinds of dangers. The simple passing of the sound had frequently given rise to grave infection, and even fatal peritonitis. A change had taken place with antiseptics, but danger had not yet been excluded, and the consideration was laid on the duty in passing the uterine sound, of proceeding with the greatest caution, and of using it as little as possible. It was less used by most gynæcologists since the introduction of the bimanual method. The proper thing to do was to first disinfect the vagina thoroughly. This could not always be carried out in private practice, but in serious cases it was necessary. The sound should be

passed so gently as not to wound. The danger was not less in injecting fluids such as tr. iodi, zinc chloride, etc., and in washing out the uterus. But there were other dangers arising from these, the fatal uterine colic that had so often followed injection into the uterus. The pain came on five to ten minutes after using the injection, it might last for hours. It was not very dangerous, and was cured by a dose of morphine. No means that had been used for avoiding these disagreeable symptoms had had any success. Whether the injection was used cold or warm, whether injected slowly or quickly, was all one. The principal thing was to leave none of the fluid in the uterus. It was useful to withdraw any of the fluid remaining with a syringe. More serious, but also much more rarely, were peritonitic pains after such injections. They did not come on immediately, but frequently only after some hours, and they always began in the neighborhood of one or other tubal opening. Not unfrequently there was fever. The pains continued several days The speaker had never observed a serious diffuse peritonitis, but such appeared to take place occasionally. The observation of such cases taught us that the peritonitis was without doubt caused by the passage of fluid through the tubes or into the peritoneal cavity. The introduction of instruments and fluid into the uterus might be dangerous in other ways, especially when the tubes were unusually large. Contraction of the tubes might be set up and their infectious contents forced into the abdominal cavity. The application of Playfair's probe was very extensive. For disease of the body of the uterus it was not suitable. It was only exceptionally that the internal os was so widely open that the medicament would not be wiped off before it reached the cavity. It was certainly an advance, therefore, when further form of treatment by Sanger's instrument was invented, consisting of an extraordinarily fine sound of silver which passed through the orifice enveloped in wadding, and by means of its pliability found its own way into the uterine cavity. As regarded artificial dilatation of the uterus, there were only two methods deserving of use, these were laminaria tents and dilatation by means of iodoform gauze packed into the cavity. All others were more or less rejected, and suited only for special cases. Dilatation by means of blunt instruments was not to be practised in the great majority of cases. It presupposed an extraordinary size of the interual os. Where naturally or otherwise the os was so wide that a 6 to 7 mm. sound could pass, it could be increased by these means. Another form was bloody dilitation for the removal of intra-uterine polypi. Here it was advantageous to incise the cervical portion. On the whole, the method of dilating by means of gauze was the best and most suitable. This procedure was generally considered to be free from danger. The speaker was not of that opinion. He had frequently heard of colleagues who had had an accident with such dilatations. Such cases were not unfrequently met with in literature. He had himself had four cases of undoubted sepsis.

One was a case of broad intra-uterine myoma that was removed. To remove the remnants the uterine cavity was dilated again. This was done by means of relays of iodoform gauze. The temperature rose, and in spite of careful removal of the gauze and washing out, the woman died. This case was not certain, as possibly there might have been iodoform poisoning. In a second case the course was similar, and the patient also died. He had quite recently had two other cases, that fortunately recovered. They were both cases of submucous myoma with thick pedicles. In one case dilatation was performed, a portion of the tumor removed, and iodoform gauze again packed in. The temperature rose to 38° C. The gauze was at once removed, and the cavity washed out with sublimate. In a few hours a rigor occurred and the temperature rose to over 40° C. The only thing that prevented him removing the uterus was that the pulse remained good. A similar case occurred in the clinic at the same time. This patient soon showed grave symptoms that plainly pointed to a form of the most acute sepsis. For this reason twenty hours after removal of the polypus the uterus was extirpated with a favorable result. Shortly after the operation it was shown that the infection had already passed beyond the uterus, for the broad ligaments were already infiltrated. The temperature also showed the same thing. It did not sink to 38° C for four days. In another case the temperature sank at once. These cases might serve as a warning to those who held dilatation by means of iodoform gauze to be free from danger. With all the precautions taken one might ask: How could sepsis take place? Above all, it must not be forgotten that in obstetrics and gynæcology one never had pure asepsis. The vagina was never free from germs, and after the introduction of gauze, possibly a passage was opened for them. This procedure was frequently undertaken also when free bleeding was going on. In spite of this, however, the method was indispensable. We should know the danger and use the procedure as little as possible. Dilatation by laminaria was doubtless still more dangerous, and should be used as rarely as possible.

The most important and more dangerous intra-uterine treatment was curettement. No gynæcologist would to-day deny that curettement of the uterus was a mos. beneficial procedure, and many cases could not be successfully treated without it. He was of opinion, however, that it was employed much too frequently. He only knew of

two indications for curettement, a diagnostic a curative. Long continued hæmorrhage and a striking succulence of the mucosa indicated hyperplastic endometritis in which curettement was useful. It was not suitable for catarrh of the cervix as proposed by Sanger. The folds of the arbor vitæ were so small that even the finest instrument could not be got into them. Perforation was one of the dangers of curetting. Especially in puerpery the musculature of the uterus was in a state of fatty degeneration and the walls were so soft that the finger could be poked through. This fact should be borne in mind in passing a sound. This excessive softness of tissue extended far beyond the puerpery. In delayed involution it might last for months. Perforation by means of the curette was not by any means unknown. Five cases were mentioned at the Gynæcological Society's meeting in March last. Symptoms did not usually follow the aceident. If they did, opium should be given for a few days, when the patient could be sent home without any harm.

The danger lay in not recognizing the perforation at the time, and scratching round in the abdominal cavity. The results were horrible and generally fatal. How could such an accident be avoided? A steel instrument was dangerous. The most important points as regarded the avoidance of danger in curetting could not be described, they could only be gradually learned. The operator must have a subtle hand and must always bear in mind to be curetting and sounding at the same time, and this can only be learnt by practice. Curetting should not be done by everybody and anybody. Whoever was not accustomed to it had better undertake an amputation of the lower extremity than a curettement. One should bear in mind that gynæcologists in most operations could only work by feel. In his opinion, all perforation of he uterine wall were not blunders, but it was a blunder when the perforation was not noticed and the curette still kept on passing about in the abdominal cavity.—Prof. Olshausen, M.D., in *Med. Press.*

CASTRATION IN HYPERTROPHY OF THE PROSTATE GLAND.

When Dr J. William White first suggested to the profession the operation of castration for the relief of hypertrophy of the prostate gland (Address at the Annual Meeting of the American Surgical Association, June 1, 1893, *Annals of Surgery*, August, 1893) on theoretical grounds, although strongly supported by experimental evidence, it is doubtful whether anyone appreciated the full value of the recommendation. Cases of prostatic hypertrophy are of extreme frequency. Sir Henry Thompson found that one man of every three over 54 years of age examined after death, showed some enlargement of the prostate; one in every seven had some degree of obstruction present; while one in fifteen had sufficient enlargement to demand some form of treatment. In this country to-day, as shown by the last census, there are more than three millions of men over fifty-four; of these, according to Thompson's estimate, which genito-urinary specialists consider a conservative one, about two hundred thousand are sufferers from hypertrophy of this gland. This number seems very large, but the assertions of Thompson unquestionably express a general rule, and in fact every surgeon must have seen men in whom some prostatic overgrowth existed *before* the fifty-fourth year. The lives of such patients are threatened because, if the obstruction is not removed, the health is rapidly undermined by the retention of urine and the consequent fermentative changes, the deleterious influence of backward pressure on the kidneys, the frequent use of the catheter, and the loss of sleep incident to the incessant demands to void urine. Heretofore the surgeon has been unable to afford distinct relief from the distressing symptoms of an advanced case of this affection. If the patient's general condition would warrant the very considerable risk, some form of prostatectomy was performed. The suprapubic method was recommended for a time, but the difficulties encountered in its performance, the frequency of suprapubic fistula as a sequel, and the high mortality following the operation, have led to its almost total abandonment. Perineal prostatectomy is also attended with considerable risk, on account of the free hæmorrhage, which cannot be controlled during the operation, and the prolonged anæsthesia which is necessary. In addition to this, the operation is a bungling one, in which the enlarged gland is removed by cutting, scraping, or gouging, while the instrument is out of sight, and much of the time it cannot be guided even by the finger. Combined suprapubic and perineal and prostatectomy enables the operator to reach and enucleate the gland with greater freedom, but it is an operation of such gravity that it would be contraindicated in the very cases in which the demand for relief was most urgent.

Perineal prostatomy is little more than a palliative measure, which does some good, temporarily, by draining the bladder and inducing slight contraction of the middle lobe of the prostate in the healing process. All of these operations confine the patient to bed for several weeks, which is, in itself, objectionable, and in addition requires the use of the bougie for a long time afterwards.

In view of these facts it is not strange that surgeons should have presented Dr. White's suggestion to patients suffering from the consequences of prostatic hypertrophy, nor is it unnatural that such patients accepted this chance for relief from

a condition that in many cases was rapidly and surely impairing the health of a person otherwise vigorous, and, apparently, without this trouble destined to enjoy many additional years of life.

With the testes already or soon to become functionless, and with the contemplation of a long period of intense suffering which will be relieved only by death, sentimental objections pale into insignificance, and the problem of securing relief without placing the life in danger, is the only one entitled to consideration.

Cases of castration based upon Prof. White's deductions, soon began to be reported. Ramm, of Christiania, Norway, recorded two in September, 1893; Haynes, Los Angeles, Cal., and White, Philadelphia, each report three cases; Finney, Baltimore, reports two cases; Smith, St. Augustine, Fla., Powell, London, Mayer and Haencl, Dresden, Moullin, London, Thomas, Pittsburg, Ricketts, Cincinnati, Swain, Bristol, England, and Bereskin, Moscow, each record one case. Thus far eighteen operations have been published. All have been more or less successful, and usually the relief from the distressing symptoms and the shrinking of the prostate have been marvellous. The least favorable cases have experienced infinitely greater relief than has been obtained by any method heretofore employed. At least as many unpublished cases have been operated upon with equally favorable results. There have been no deaths from the operation; of course, few would be expected in the hands of competent surgeons.

To those familiar with these cases, the rapid shrinking of the prostate and the simultaneous relief afforded the patient, have been truly wonderful. The operation has therefore passed the experimental stage, and has legitimately established for itself a position among the most successful of operative procedures. Indeed, the results have been so uniformly favorable, that castration may now be considered a specific for hypertrophy of the prostate.

It is necessary, however, to utter a word of caution here. Castration is not indicated in every case of prostatic enlargement or urinary obstruction. To secure uniformly successful results one must be certain that the condition from which thepatient is suffering is appropriate for the operation. Cases of prostatic abscesses, tumors of the prostate and of the region of the neck of the bladder, and other forms of obstruction in the neighborhood of the prostate must be distinguished from true prostatic hypertrophy. Without careful discrimination, both the surgeon and the patient will be disappointed, and the operation will unnecessarily be brought into discredit.

As it stands to-day, however, in appropriate cases, it appears to mark an advance in the surgery of the prostate, which, when the gravity and the frequency of the condition of hypertrophy are recalled, together with the more or less ineffectual and always dangerous methods of treatment which have prevailed, must be a source of congratulation not only to Professor White but to the profession at large, and to thousands of patients who, having outlived their sexual lives and earned an old age of mental and physical repose and intellectual enjoyment, have had only a few short years of torment and misery to look forward to on account of this hitherto intractable disease.—*Ed. Univ. Med. Mag.*

DIPHTHERIA AND PSEUDO-DIPHTHERIA.

Park and Beebe, *New York Medical Record*, in a report to their chief, Dr. Biggs, of the New York Health Board, record 5611 cases of suspected diphtheria; of these 3255 were found to contain the Lœffler bacilli, in 1540 no diphtheria bacilli were present in the cultures, and as these cultures had been made in an early period of the disease, the cases from which they were taken may be considered as *not* to have been true diphtheria. In 1816 cases, although no diphtheria bacilli were found in the cultures, yet, for various reasons, the cases were considered to be of a doubtful nature, although they were probably not diphtheria. Thus of the 5611 cases of suspected diphtheria, it would propably be just to consider that 60 per cent. were true, and 40 per cent. false diphtheria.

In true diphtheria the ages of the cases attacked range between 3 weeks and 70 years. The number of cases increased with each twelve months of life up to the fourth year, and then gradually diminished. The mortality was highest in the first two years of life, and then steadily diminished until adult life was reached, when it again slowly increased. Scarlet fever was associated with diphtheria in about 5 of every 1000 cases; 450 cases of false diphtheria were investigated, and there were eleven deaths; five of the deaths occurred in children under 5 years of age, and were all laryngeal cases.

Membranous Croup.—In 286 cases examined the disease was confined to the larynx or bronchi, three of these were in adults. In the cultures of 229 of the cases Lœffler's bacilli were found, and they were thus proved to be true diphtheria. In 167 of these 229 cases there was no exudate above the larynx. In 57 of the 286 cases examined no diphtheria bacilli were found, but in 17 of these the cultures were unsatisfactory, leaving 40 cases of croup in which diphtheria bacilli were certainly absent. In 13 of the cases there was more or less exudate on the tonsils or pharynx.

The Value of a Bacteriological Diagnosis.—After a year's trial the following conclusions have been arrived at. The examination by a competent bacteriologist of the bacterial growth in a blood-serum tube, which has been properly inoculated and kept for fourteen hours at the body temperature, can be thoroughly relied on in cases where there is visible membrane in the throat, if the culture is made during the period in which the membrane is forming, and no antiseptic has been lately applied. In cases where the disease is confined to the larynx surprisingly accurate results can be obtained, but in a certain proportion of cases no bacilli will be found from the first examination, and yet will be abundantly present in later ones. In nasal diphtheria a negative result may be obtained from a culture made from the throat, and yet the bacilli be found in cultures made from the nose.

For diagnostic purposes it must be considered that all bacilli found in throat inflammations suspected to be diphtheria, which possess the morphological and cultural characteristics of Lœffler's bacilli, must be considered as virulent unless animal inoculations prove otherwise. Further, it has been shown that the absence of virulence in a culture derived from one bacillus is not sufficient to prove that cultures from other bacilli of the same case would not be virulent.

Length of Time Bacilli Persist in the Throat.—In 605 convalescent cases 304 showed an absence of the bacilli within three days after the complete disappearance of the membrane. In 301 cases the bacilli persisted for a longer time: in 176 cases for 7 days; in 64 cases for 12 days; in 12 cases for 3 weeks; in 4 cases for 4 weeks; in 4 cases for 5 weeks; and in 2 cases for 9 weeks after the time when the exudate had completely disappeared from the upper air-passages.

The Relation of the Pseudo to the True Diphtheria Bacillus.—The authors have examined 330 healthy throats and found *eight* of the cases to contain *characteristic virulent* diphtheria bacilli. Twenty-four of the cases contained non-virulent characteristic diphtheria bacilli, and twenty-seven contained non-virulent pseudo-bacilli. They conclude that virulent diphtheria bacilli are to be found in the throats of a small proportion of healthy persons throughout the city, and that they have been derived either directly from diphtheria cases or from those who have been in contact with them. As the bacilli in cases of true diphtheria are known to gradually lose their virulence, and as this loss of virulence can be caused artificially, it seems to the writers that these bacilli, characteristic except as to virulence, should be regarded as true diphtheria bacilli which have lost their virulence. In the twenty-seven cases of pseudo-diphtheria there were differences in staining, etc., which give abundant reason to separate them from true bacilli.

Virulent bacilii may be received (1) from discharges and membranes from diphtheria patients. (2) From the secretions of the throat and nose of convalescent cases in which the bacilli persist. (3) From the throats of healthy individuals who have acquired the bacilli by being in contact with others having virulent germs on their persons or clothing.

The conclusions reached by the authors are here appended. They seem justified by the article of which the above is a very brief abstract. The article is worthy of very careful reading by all physicians.

(1) All inflammations of the mucous membrane due to the diphtheria bacillus of Lœffler should be included under the name diphtheria, and in this report they have been so included. An acute hyperæmia of the mucous membrane, caused by the Lœffler bacilli, is considered as truly diphtheritic as an inflammation with pseudo-membrane or exudate, and a case in which the lesions are confined to the larynx or bronchi as truly diphtheria as one in which the tonsils and pharynx are involved.

(2) Under pseudo-diphtheria should be included all inflammations of the mucous membranes which simulate true diphtheria and which are due to streptococci, or, more rarely, cocci.

(3) The name croup, or membranous croup, should be regarded as a term merely indicating that the location of the pseudo-membranous or exudative lesion is in the larynx, and not as describing the nature of the disease, whether diphtheritic or pseudo-diphtheritic. In New York City, at the present time, 80 per cent. of the cases of "croup" are diphtheria.

(4) The examination of cultures made upon solidified blood-serum under the conditions insisted on by the department form a reliable method for determining whether the diphtheria bacillus is present or absent in a throat. For diagnostic purposes cultures should be made before the pseudo-membrane or exudate begins to disappear.

(5) Virulent diphtheria bacilli were apparently present in about 1 per cent. of the healthy throats in New York City at the time of these examinations. Diphtheria was, however, rather prevalent at this time. Most of the persons in whose throats they existed had been in direct contact with cases of diphtheria. Very many of those whose throats contain the virulent bacilli never develop diphtheria. We must, therefore, conclude that the members of a household in which a case of diphtheria exists should be regarded as sources of danger, unless cultures from their throats show the absence of virulent diphtheria bacilli.

(6) The bacilli found in the original serum cultures which in appearance and staining are identi-

cal with the typical Lœffler bacillus may be regarded for diagnostic purposes as virulent diphtheria bacilli, if the cultures have been made either from throats containing exudate, or from those of persons who have been in contact with true diphtheria; for investigation has shown that over 95 per cent. of such bacilli are virulent. Bacilli, on the other hand, which resemble the pseudo-diphtheria type must be subjected to both cultural and animal experiments before their nature or virulence can be judged.

(7) All bacilli which are identical with the virulent Lœffler diphtheria bacillus, morphologically, biologically, and in staining by re-agents, should be classed with the diphtheria bacilli, whether they have much, little, or no virulence when tested on guinea-pigs. Bacilli which have entirely lost their virulence rarely, if ever, regain it. They probably are incapable of causing diphtheria, for the twenty-four cases in which they were found by us never developed any lesions, nor were they the origin of any case of diphtheria, so far as could be ascertained.

(8) The name pseudo-diphtheria bacillus should be regarded as applying to those bacilli found in the throat which, though resembling the diphtheria bacilli in many respects, yet differ constantly in others equally important. These bacilli are rather short, and are more uniform in size and shape than the typical Lœffler bacillus. They stain equally throughout with the alkaline methyl-blue solution, and produce alkali in their growths in bouillon. They are found in about 1 per cent. of the healthy throats in New York City, and seem to have no connection with diphtheria. They are never virulent.

(9) One or more varieties both of streptococci and of other forms of cocci exist in the great majority, and possibly in all, of the healthy throats in New York City. Cultures from the throat in cases of pseudo-diphtheria contain more cocci, especially more streptococci, than those from healthy throats, but otherwise do not seem to differ.

(10) The investigations of the health department have given striking evidence of the marked difference in mortality between true and pseudo-diphtheria, for while it was 27 per cent. in diphtheria, it was under 2 per cent. in pseudo-diphtheria.

(11) The combined clinical and bacteriological investigation of over 5,000 cases has demonstrated clearly the fact that many of the less characteristic cases of diphtheria are so similar in appearance, symptoms, and duration that it is impossible to separate them, except by bacteriological examinations. In the more severe cases, and after the disease has fully developed, cultures are less necessary, although their systematic use is desirable.

(12) Persons who have suffered from diphtheria should be kept isolated until cultures prove the bacilli have disappeared from the throat, for, not only are the bacilli which persist in the throat virulent, but they are not infrequently the cause of diphtheria in others. Where cultures cannot be made, isolation should be continued for at least three weeks after the disappearance of the membranes, for our experience has shown that it is not unusual for the bacilli to persist that length of time.

(13) In pharyngeal cases in which thorough irrigation of the nostrils and throat with 1 to 4000 bichloride of mercury solution has been practised every few hours, the bacilli have not remained in the throat for as long a time after the complete disappearance of the pseudo-membrane as when no antiseptic has been employed. Other antiseptic and cleansing solutions may also be useful.

(14) Inflammations of the mucous membrane due to streptococci, either alone or associated with other cocci, are usually mild in character. These inflammations may be more serious when the lesion is located in the larynx, or when they are complicated by scarlet fever or measles.

(15) While the streptococci, and perhaps other forms of cocci, may be considered as the primary etiological factor in pseudo-diphtheria, yet, in the majority of cases at least, certain predisposing factors, such as exposure to cold or other deleterious influences, or the presence of certain infectious diseases, appear to be of great importance in determining the occurrence of the disease. The streptococci which, under these conditions, apparently cause the disease are probably those which had for a long time existed in the throat, and not those freshly derived by communication with other cases of pseudo-diphtheria. In a small number of cases, indeed, the histories suggest a direct communication, but the causation may be equally explained by the supposition that the second case shared with the original one the same predisposing cause.

(16) The slight mortality and the usual mildness of the cases of pseudo-diphtheria do not warrant us in enforcing isolation, even if further investigation produced positive proof that this disease is communicable. With the results of these investigations before us we can appreciate the difficulty of exterminating diphtheria from a city like New York. On the one hand, we have cases of diphtheria scattered all through the city, many of which are so mild as to be unrecognized, and, on the other hand, we have the crowded tenements with their ignorant and shifting population, where proper isolation of the patient from other members of the family, or of the family from other inmates of the building, is usually impossible, unless harsher measures are adopted than are now customary.—*Univ. Med. Mag.*

NON-OPERATIVE TREATMENT OF HÆMORRHOIDS.

Gibbs, who writes on this subject in the *Post-Graduate*, makes no distinction between the two common varieties of piles—the internal and external—because the treatment of either answers for the other. There is a very painful little tumor frequently seen on the verge of the anus, very much the size and color of a huckleberry, consisting of a small thrombus in one of the marginal veins, covered partly with skin and partly with mucous membrane. If let alone, the clot is absorbed and the tumor disappears, or else becomes infected, suppurates, and cures itself spontaneously; but in either case only after, perhaps, a week of suffering. In these cases the proper plan—and few patients will object—is to use a few drops of cocaine, laying open the cavity and pressing out the entire clot, thus curing the trouble and stopping the pain in half an hour or less. If, on the other hand, this little operation is not permissible, there is nothing to do but undertake three or four days' treatment, based on general principles, consisting in cathartics, preferably podophyllin or cascara, rest in bed, and cold or hot applications. Cocaine he has not found always satisfactory, though it does sometimes work to a charm. Among the wet applications, either hot or cold, his preference is for some preparation of witch hazel or the common hospital lead and opium.

Last, and not least, is the time-honored suppository of opium and belladonna, so dear to the hearts of the medical profession. This is the recognized hospital treatment in New York, and covers all cases of pain from any cause whatsoever, when the lesion is low down, in reach of the anus, but in severe cases rest in bed with catharsis accomplishes far more in a given time.

More painful still, and more difficult to handle, is that complication of marginal hæmorrhoids known as fissure. It is most usually found posteriorly in the median line, overlapped by a fold of protruding hæmorrhoid. Here again, comes up the question of operation. For the most part when the writer finds a case of this sort that does not respond to the general treatment just laid down, he strongly advises giving ether, stretching the sphincter, cutting the fissure, and removing the hæmorrhoids, thus radically curing at once an old chronic disease. Next best is the treatment already mentioned, when enforced as vigorously as possible.

Not infrequently these fissures heal quickly under local applications of nitrate of silver not stronger than 20 grains to 1 ounce, repeated not oftener than once in twenty-four hours; while, on the other hand, the solid stick is very apt to convert a small tear in the mucous membrane of the anus into a chronic, intractable ulcer. The temptation to use morphine in very severe, prolonged pain is great, yet the harm it does in these cases is not to be forgotten. Admitting the truth that constipation is the direct cause of acute symptoms in chronic rectal diseases, we have no doubt in saying that a three or four days' course of morphine will reconcile almost any patient, no matter how timid, to either death or operation, after the first passage over an "intolerable" fissure. Verily, "constipation is the thief of time." A less frequent cause of pain, as a symptom of piles, may be seen when a mass of tumors prolapses and remains outside of the body, swollen, red and perhaps gangrenous. Here the same procrastinating treatment will, in a week, more or less, help to diminish the acute symptoms. To summarize: In order of importance, rest in bed, unloading of the bowels, sensible diet, abstinence from alcohol, and an abiding faith on the part of the medical attendant that subsequent and severe attacks will induce a great sufferer to submit to an operation involving no pain or risk to life, with a guarantee of no more trouble.

The second symptom already spoken of is hæmorrhage, usually accompanying the act of defecation, and varying from a few drops to an ounce or more. Most people do not bother with "a little thing like this," simply because it entails no pain.

On the first occurrence of bleeding, many patients are more or less frightened, until they have assured themselves that they have "nothing but piles," and let it run on indefinitely, except in those rare cases when the loss of blood begins to reach the point of exsanguination; but the majority of cases are allowed to continue or stop spontaneously. Hæmorrhage, whether profuse or not, can be easily controlled, if the bleeding spots or area can be seen, by careful applications of nitric acid, or by touching with the Paquelin or galvano-cautery. There is no pain unless the skin margin is burned, and one application should be sufficient. Of course, any destruction of healthy mucous membrane does harm, and the cauterization should be superficial and limited to the bleeding points or areas. Such cases as require etherization and ligation the author has read of, but not seen.

Prolapse of internal hæmorrhoids occurs in advanced cases where the tumors are large and flabby. Whether they return to the cavity of the rectum with or without assistance after defecation, this symptom causes but trifling annoyance. It is not till the sphincter becomes somewhat relaxed and allows protrusion at any time, on standing or walking, that any real distress occurs, and this brings us back again to the subject of pain and what to do for it. In these severe cases

local treatment is not very promising. Local applications or cauterization, thorough reduction, and laxatives are worth trying, especially if re-enforced by a few days' rest in bed. If these fail, there is nothing but operation. Last and worst of all are cases of prolapsed hæmorrhoids that refuse to be returned, become gangrenous, inflamed and extremely painful. There is then absolutely nothing to do but rely on the cure and wait for the sloughing to destroy enough tissue to allow retraction and contraction.

The general principles already laid down are to be applied in the many nervous reflexes so common to all rectal diseases: symptoms referred to the bladder, urethra, ovaries, intestinal tract. After successfully quieting one or all of the symptoms of which we have spoken in such detail, there is nothing so useful as a local tonic as cold water applied to the perineum twice a day with a bath sponge; better than any suppository or astringent, used copiously, not inside the rectum, but outside of it. We have omitted all mention of carbolic-acid injections, for the reason that this method of treatment is in its true sense a surgical operation devised for the purpose of doing away with venous tumors, and liable to all the dangers and complications of cutting with knife and scissors, such as great pain, infection, abscess, sloughing to any extent, and secondary hæmorrhage. Were we discussing operative measures it would have to take its chance with the ligature, the clamp and the cautery. Summing up in a few words, the non-operative treatment of hæmorrhoids comes down to general medication of some predisposing cause and local applications to relieve individual symptoms.—*Therapeutic Gazette.*

"THE INCREASING NERVOUSNESS OF OUR TIME."

Under this rather startling title Professor W. Erb at Heidelberg gave an address some time ago which demands more than a passing notice. Professor Erb takes it for granted that there is marked increase of functional nervous disorders, and he believes that the events of the present century have naturally led to this result. The nineteenth century began in disorder and commotion. France had passed through a bloody revolution which was to be followed by the excitement and exhaustion of Napoleonic adventures; restlessness, political and social, was followed by a period of calm, but, with the advancing years, labor-saving inventions rapidly replaced man and increased wealth, and rendered communication easy—as our author says, time and space seemed to be annihilated.

In science, in literature, all were developing, and with it there appeared incapacity for restful pleasures; rushing from change to change seeming to be the only alternative to work. With overwork there was over-crowding and over-stimulation; alcohol and tobacco were used in greatly-increased quantities; railway travelling and its nerve-jarring motion still further tended to nervousness; and, so Professor Erb convinces himself, that with all this there has been a clear loss of nerve tone to the whole of the highly-civilized nations.

Nothing could have been more brilliantly put than the contrast between the normal reaction to work and worry and the neurasthenic and abnormal reaction to the same conditions, and it will be for us to see whether we agree with all that Professor Erb says. According to him, all this rapid restless movement has left an irritable and slow-recovering nervous system, which must be considered as neurasthenic. The essentials of this disorder, which has not been recognized twenty years, are increased sensitiveness, with weakness, weariness, lack of power of endurance, and defective recuperative power. This disorder is a refinement of hysteria and hypochondriasis, and it is the outcome of the conditions of life. He thinks it ought to be found in all periods of excitement and of luxury, but owns that there is no evidence of its existence in Greece or in Rome.

The disorder is to be recognized and to be met by changing conditions, and nerve hygiene is to be considered as much as sanitation. From school days to professional life the human being is to be tended and brought up, his mental, moral, and physical education is to be regulated, his holidays are to be methodised, his business is to be conducted in healthy surroundings, and his cities are to be made healthy and beautiful, with fresh air and beautiful surroundings. Thus the Professor is a preacher of hygienic socialism. As we said before, we have been charmed with the address, but not convinced.

The old question reappears in another form. Is increased insanity and nervous disorder in necessary correlation to developing complexity of society? It must be recognized that the more complex the rules of society the more frequent will be breaches of these rules, at all events, for a time. In developing civilization, too, we have a very perplexing factor added in the survival and the propagation of the non-fittest, and this doubtless adds to the increasing number of the nervous.

We are inclined to believe that there is some slight increase of nervousness, but that there is a much greater knowledge of the subject, and with knowledge comes sub-division and classification. We remember the time when hysteria, in its present connotation, was looked upon as a new and increasing danger to society. This disorder is now recognized as no longer a defect of will for which the patient is to be blamed, and has been

sub-divided. Hypochondriasis in the same way is no longer considered to be a *maladie imaginaise*, but is recognized as having some organic basis, and with this progress the so called functional disorders have to be studied apart, and are now placed under the head neurasthenia. We do not believe more women, at all events in England, have "nerves" now than had fifty years ago. With the increase of excitement there has been a still greator tendency to more freedom of exercise, more freedom from conventionalism, and much healthier home surroundings.

One change to which attention might be called is the decrease of religious feeling and the allied emotional excitement. It is thought by our author that over brain-work has had a very serious effect. We have grave doubts as to overwork being established as a cause of neuroses, and we have still greater doubt as to there being any amount of overwork in England. Worry, not work, is the danger, and we believe that danger arises from decreasing and deferred marriage.

We agree with our author in recommending carefully selected mates, and healthy surroundings, and skilled and orderly education, but we do not believe that people will be made good by Acts of Parliament or professional orations, and we do not believe there is any very serious risk to the stability of society in the so-called development of neurasthenia.—*Br. Med. Jour.*

THE EFFECT OF THE LOCAL APPLICATION OF GUAIACOL IN THE REDUCTION OF THE TEMPERATURE IN TYPHOID FEVER.

In a conversation I had last spring with Dr. J Solis-Cohen regarding a case of pulmonary tuberculosis with a high temperature, he suggested the use of guaiacol locally applied for its reduction as a remedy that had proved proved useful in his hands.

When I entered upon my term of service as attending physician to the Williamsport Hospital, the first of September last, I determined to give this remedy a good fair trial in the reduction of temperature in typhoid fever. I had it applied 230 times in the hospital and 43 times in private cases, making 273 times it was applied under my direction in three months. These applications were made to 12 different persons, 7 males and 5 females, making an average of about 24 applications to each person. The greatest number of times it was applied to any one person was 70, and the least number of times it was applied was once; the largest dose used was 25 drops, and the smallest dose used was 2 drops; the greatest reduction of temperature was from 106.8° to 101°, by the application of five drops, in the case of Mrs. Horton, with a corresponding reduction of the pulse from 136 to 110 per minute. Again you will notice in the same case, by applying 5 drops on the same day when the temperature was 106.2°, with a pulse of 148, it was reduced in one hour to 102°, and the pulse to 120 per minute. This patient, as you may see by consulting the special reports, was unusually susceptible to the action of this drug, as the application of 2 drops when the temperature was 103° and the pulse 130, in one hour and thirty minutes reduced the temperature to 101.4° and the pulse to 120, while in the case of James Hill 20 drops were required to reduce the temperature from 104° to 98.4° in three hours and fifteen minutes.

I show you a large number of special reports of the cases in which guaiacol was applied, and which may be useful in showing not only its effect on the temperature, but also the effect on the pulse and respiration. You will observe that within thirty minutes after the application there was a fall in the temperature, and in most cases there was a corresponding reduction in the number of heart-pulsations per minute. The method of application was as follows:

The right iliac region was thoroughly cleansed with soap and water, and, after being dried, the guaiacol was slowly dropped upon the part and thoroughly rubbed in with the hand for from ten to fifteen minutes. The part was then covered with oiled silk. The only preparation used was that prepared by Merck, and it did not fail in a single instance to produce the desired result. Any other point would probably be as good for its application, bnt as it was as near the seat of the disease as I could possibly get, and the ease with which it could be reached and covered with the oiled silk without in any way disturbing the patient, made me select this point for its use.

The effect of guaiacol lasts from three to four hours, and the more often it is used the greater the effect. I observed a number of chills from the sudden reduction of temperature, but after I became more accustomed to its use the chills were much less frequent. If it can be avoided, the temperature should not be reduced below 100°, which can easily be regulated after the applications have been made a few times, care being taken to commence with a small dose, say 10 or 15 drops. I have never found it necessary to use the large doses of 40 or 60 drops as employed by Dr. DaCosta.

It has been suggested that by this rapid reduction of temperature there is danger of producing congestion of some of the internal organs of the body. I have not seen a single unfavorable symptom (except the occasional chill) follow its use.

All of my cases recovered. There was but one case of pneumonia-complication, and this could in

no way be attributed to the guaiacol, as it came on six days after the last application had been made. Sweating nearly always followed the application, being more severe when the reduction of temperature was sudden than when it was more gradual. No marked depression followed; the pulse was lessened in frequency and decidedly improved in strength.

No irritation of the skin followed when the guaiacol was used alone, and patients never objected to its use. The disagreeable odor that has been described by some as being objectionable to patients was never referred to but by one, and then only on the first application.

I used guaiacol and eucalyptol combined in the proportion of one of the former to two of the latter a number of times, but believe I had better results with the guaiacol alone. Besides, eucalyptol produces decided irritation of the skin, and in no way adds to the efficacy of the guiacol.

This drug when applied to a person having a normal temperature produces no effect either upon the general condition of the individual or upon his temperature, as shown by an appended chart.

When I was following these investigations I had no knowledge of guaiacol having been used locally for the reduction of temperature in typhoid fever, but on looking over the literature of the subject I found that Dr. DaCosta used it in a few cases in the Pennsylvania Hospital last spring.

It is asserted by therapists that guaiacol is eleminated by the lungs and kidneys. In my cases treated with it repeated examinations of the urine were made by the resident physician, with negative results so far as the finding of the drug was concerned. It was at times noticeable on the breath.

In the carrying on of these investigations I received material aid from Dr. H. C. Frontz, resident physician, to whom I wish to return my thanks.

In summing up this question I feel convinced of the following facts:

1. That guaiacol when locally applied is certain to reduce temperature.

2. That with the care that a physician should always use in the administration of drugs, it is absolutely safe.

3. That chills will not occur if the temperature is not reduced below 100° Fahrenheit.

4. That no deleterious effect is produced upon any of the organs by its use.

5. That it is easy to apply, and can be used by anyone competent to nurse a typhoid fever case.

6. There are no depressing effects following an intelligent use of the drug.

7. That by continued use the dose can be gradually lessened.

8. That it is far superior to the cold bath; that it can be used by one person; that no appliances are necessary for its use that are not obtainable in every house; that it is much more pleasant to the patient; that it is fully as effective; that patients are not subjected to the danger of moving, and they offer no resistance to its use.

I have thoroughly tried the bath and cold packs, and I know they have proved very efficacious in many cases, but with my experience with guaiacol I have no desire to return to either of them.—Dr. McCormack in *Med. News*.

CHLORAL IN LABOR.—The use of chloral in the earlier stages of labor is undoubtedly gaining favor in this country. We understand that it is largely used in England. Dr. Gardiner has recently written strongly in its favor in the *Lancet*. He believes that it has a marked power in assisting dilatation of a rigid cervex and has never seen post-partum hæmorrhage following its use. Playfair has long been an advocate of the drug for this purpose. In the last addition of his work on obstetrics he is even more positive in his statements than in his former editions. Those who have had much experience, will, we think, agree in this opinion. Playfair expresses the belief that it is destined to be more extensively used than is at present the case. In his English edition he says that so far as his experience has gone, he has not met with any symptoms which has led him to think that it has produced bad results.

The point of special value in favor of chloral is that it may be administered when chloroform cannot be used. To many mothers the most distressing part of the labor is the early stage when the pains are nagging and ineffectual. While the pains are cutting and grinding during the early stage of dilatation, chloroform can rarely be used, but chloral frequently gives most satisfactory relief. Especially among nervous mothers of the upper classes, these pains are sometimes almost intolerably severe, while the labor progresses but little. After the use of chloral, we have repeatedly seen a despondent and anxious mother regain her courage and pass through her ordeal with comparative ease. It unquestionably relieves the irregular and nagging pains of this stage, and it is our belief that it materially aids in dilatation of a thin and rigid cervex. Playfair believes that nothing else answers so well in case of rigid or undilatable cervex and believes it is a most effective remedy in such conditions.

The amount of chloral administered must vary with the case and conditions. Fifteen grains may be given at the first dose, and may be repeated in half an hour, and again, if necessary, after one or two hours. If the stomach is irritable and will not retain the chloral it may be given by rectal injection. It seems in fact to be even more effec-

tive when administered in this way. Thirty grains are usually sufficient to produce a somnolent condition in which the pains become less frequent but stronger, and in which nervous excitement is calmed. The patient frequently drops into a light sleep between the pains, but rouses as soon as they recur.

The use of chloral does not in any way interfere with the use of chloroform. The use of chloroform, however, is not required so early and the amount administered as a rule can be much less. We are convinced that too free use of chloroform retards the pains and that the tendency to post-partum hæmorrhage is somewhat increased. We have not seen this after the use of chloral.

The time is long since past when arguments are required to establish the propriety of administering anæsthetics during the course of labor. It is the duty of the physician not only to cure disease, but to relieve pain and suffering. The physician who neglects to relieve suffering when he can do so without detriment to his patient is seriously remiss in his duty.—*Gaillard's Med. Jour.*

THE PATHOLOGY OF THE PROSTATE.—The theories current at present regarding this condition (hypertrophy) are: 1 That based upon the anology between it and fibroid disease of the uterus. 2. That it is merely an occurrence in a constitutional disorder which begins as an arterio-sclerosis and ends in fibroid degeneration, affecting the genito-urinary organs in a special manner. 3. That it is secondary to and developed as a compensatory measure to primary changes in the bladder.

These three theories are disproved by the following facts: 1. The prostrate is not the homologue of the uterus. 2. Uterine growths originate as fibromyomata and have little or nothing to do with the mucous membrane; neither does the enlargement begin as a fibroid degeneration, but as aglandular overgrowth. 3. The prostrate is of sexual origin and has to deal only with sexual function. It has nothing to do with micturition, which, if the prostate remains undeveloped or undergoes atrophy, takes place just as if the prostate were normal. There are, however, certain facts which we know that suggest the real cause. The enlargement is dependent in some way upon the testes. The evidence in favor of this is in brief as follows: 1. The normal development of the prostate is undoubtedly controlled by that of the testes. Up to puberty there is no prostate worth mentioning. 2. If castration is performed before puberty the prostate never grows; if after puberty, it wastes and disappears, and the same has now been shown to be true of the abnormal development known as enlargement. This rarely begins after an age at which it may be presumed that the testes are no longer functional, and it disappears if they are removed. There are now nine cases on record in which castration has been followed by a complete disappearance of the enlargement within a few weeks. How the testes act is questionable. The mere induction of sterility (such as by section of the vas deferens), although it may cause atrophy of the testes, does not appear to be sufficient. The influence, whatever it is, comes from the testes themselves and exists so long as they are present. It may be exerted through the nervous system or through the circulation. Three cases have lately been reported of unilateral atrophy after removal of one testicle. If post-mortem examination of these cases should show this to be true, it is probable that the influence is exerted through the nervous system.

If this suggestion that enlargement of the prostate is dependent upon some change which takes place in the testes during the latter part of their active life, should be accepted, it will be a curious instance of the way in which modern views are sometimes foreshadowed by the speculative theories of a long past date.—*Lancet.*

THE TREATMENT OF CYSTITIS.—Dr. Gardner W. Allen, of Boston, read a paper on this subject, based on the records of a number of cases which had come under his observation during the past eight years. Many of these cases had been of gonorrhœal origin, and in nearly all the inflammation had been confined to the neck of the bladder. Extension of gonorrhœa into the neck of the bladder, accompanied by a sharp onset of urinary symptoms, was, of course, common enough. In non-gonorrhœal cases the cause of the cystitis was not always clear, but in a certain number the disease was apparently traceable to a posterior urethral catarrh resulting from congestion of the prostatic portion, with or without inflammation of the seminal vesicles, and brought about by prolonged and repeated sexual excitement. It began insidiously, had little or no tendency to recovery, and was apt to prove intractable to treatment.

As regarded the treatment of cystitis, of the various internal remedies the author said that he preferred the saline diuretics, especially benzoate of sodium. Few surgeons nowadays, however, long deferred local treatment of the disease. For the simple purpose of washing out the bladder, perhaps a saturated solution of boric acid gave, on the whole, the best results. For the purpose of producing a decided impression upon the mucous membrane of the vesical neck the author said that he had had very gratifying experience with nitrate of silver and permanganate of potassium. Of the nitrate of silver, he rarely used it stronger than in one-per-cent. solution, injecting from ten to fifteen minims. The injections appeared to be more effectual if preceded immediately by the passage of a large sound, excepting in the more

acute cases. Permanganate of potassium he had found to be very efficacious in cystitis and chronic prostatitis. Where it failed nitrate of silver often succeeded, and *vice versa* The bladder should be thoroughly irrigated with the permanganate solution (1 to 4,000 or 1 to 5,000), and this was conveniently done by means of a large Ultzmann syringe connected with a soft-rubber catheter. One syringeful at a time was injected and allowed to flow out again, and this was repeated until the solution came away with its color unchanged. Then two or three ounces were injected and left in the bladder as long as they could be comfortably borne. The author then detailed the histories of a number of cases of cystitis, that had come under his observation.—*N. Y. Med. Jour.*

A New Method of Reducing Backward Displacements of the Uterus. — Reporting the communication of Rapin at the Rome Congress, Batnaud says that many cases of backward displacement of the uterus, in which this organ is supposed to be adherent to the surrounding viscera, are, as a matter of fact, simply held in Douglas' pouch by a combination of atmospheric pressure, the intestines, and the two layers of the sacro-uterine ligament, which imprison it laterally. To dislodge the uterus from this incarcerated position, Rapin has proposed this procedure :

The first two times insert the sound and rotate in the usual way. If the position remains unchanged, the third time, instead of lowering the handle of the sound, press upon the sound from behind forward and from below upward, moving the uterus as with a lever; by so doing one presses upon the entire anterior face of the uterine cavity, not only with the point, but with the entire part of the sound within the uterus; then we raise and draw the uterus forward and upward without endeavoring at first to replace it.

By this manœuvre we dislodge the fundus from the rectum, opening the *cul-de-sac*, and the intestines, pressed down by the atmospheric pressure, fall into the place formerly occupied by the fundus, thus aiding in the forward movement of the organ.

At the moment the intestines assume their new position one feels that the resistance is overcome, and if now the handle of the sound is lowered, the replacement is completed without the aid of force or the provoking of pain. The sound is withdrawn, while, with the index finger in the vagina, the neck of the uterus is pushed backward and the fundus comes forward into position. When there is resistance to the upward and forward traction, instead of the continuous pressure, a to-and-fro or a sawing movement, causing the uterus to advance in a zigzag manner, is often of advantage.

In all these manipulations the sound is governed by one hand, while the index finger is placed within the vagina, palpating the *cul-de-sac* and controlling the sound within the uterus.

To maintain the uterus in position a pessary is used that fits partly in the vagina and partly within the uterine cavity. — Jules Batnaud, in *Revue Médico-Chirurgicale des Maladies des Femmes —The Brooklyn Medical Journal.*

A New and Reliable Anthelmintic. — Dr. Mirowicz first called public attention to naphthaline, as a reliable anthelmintic and tenicide, in 1891. Naphthaline is a coal-tar derivative, crystalline in form, insoluble in water, and but slightly soluble in alcohol. It is soluble in alkaline digestive fluids, but is not absorbed through the intestinal walls to any appreciable extent. Four hours after the exhibition of a maximum dose, no evidence of its presence could be detected by any abnormal products in the urine or sweat. It is absolutely destructive to all forms of entozoa, is an unchangeable intestinal antiseptic, is a neutralizer of ptomaines—rendering them innocuous, is an anti-ferment. As a tenicide, one dose is usually sufficient, and it is unnecessary to examine for the head—it always comes away. There is no uncertainty about the dose, as with filix mas ; there is no permanent injury to the gastric glands, as with tannate of pelletierine ; there is no terrible cephalalgia, as with ammonium embelate ; there is no danger, as with chloroform.

Naphthaline, however, has its drawbacks. It is a very disagreeable drug to administer. Not only is it quite unpleasant to the taste and smell, but it is followed by offensive eructations.

As to technique, it should be given in capsules, 20 grains for one dose, and in the morning when the stomach is empty.

The three previous meals should contain an excess of salty and vegetable acid foods. Four hours after taking the capsules, an 8 grain dose of calomel with 4 grains of bi-carbonate of soda should be given, followed in another four hours by two tablespoonfuls of castor oil. This is for an adult of average size. The dose for children should be about one-half as much, given only when extreme debility does not exist. Naphthaline can be had from any first-class drug house and should cost about 20 cents per ounce. The chemically pure crystals only should be used.— A. D. Hurd, M D., in *The Cincinnati Medical Journal*

Lycetol.—Dr. Wittzack, (*Allg. Nedivin. Central Zig.*,) calls attention to this new derivative of piperazine, which has been introduced by the Farbenfabriken vorn. Friedr. Bayer & Co., of Elberfold. Lycetol is the tartrate of dimethyl piperazine and is fully as effective as the base piper-

azine. Aside from the pronounced action of the base as a uric acid solvent, a favorable effect could be anticipated from this preparation because the other component consists of tartaric acid (*i. e.*, an alkaline tartrate) which has a prompt diuretic action, and also for the reason that the tartrate is converted into a carbonate in the organism and renders the blood alkaline. If the theory is correct that in gout in general, there is no increased formation of uric acid, but that the blood of gouty persons is only faintly alkaline, and therefore less capable of holding uric acid or its salts in solution, then the administration of this tartrate of a piperazine derivative, must produce the combined effects of its components. Lycetol also possesses the great advadtage of having an excellent taste and of being non-hygroscopic. Its aqueous solution has an agreeable acid taste and if some sugar be added it is cooling like lemonade, and does not excite repugnance when administered for a long time. On account of its freedom from hygroscopic properties it can be dispensed in the form of powders. Wittzack has employed lycetol in seven cases of uric acid diathesis with excellent results. After its administration he observed: 1. A considerable increase in the secretion of urine. 2. That the remedy was well tolerated without producing any disturbance of the general health. 3. A subsidence of the gouty symptoms, an absence of the otherwise periodical recurrence of gout and a considerable diminution of urinary gravel under its continued use.

THYROID EXTRACT IN GOITRE. — The author states that his observations confirm the excellent effects (previously reported by others) of the ingestion of thyroidin on ordinary goitre patients. Of 12 patients thus treated, 9 were cured, or at least improved.

In all these cases use was made of an extract of raw thyroid gland (from the sheep or calf), administered in cachets or sandwiches, in doses of 6 to 10 grammes (1½ to 2½ drs.), repeated at intervals of 2 to 8 days.

Among the author's patients were four children, from 4 to 12 years old; in all of these, after 8 to 15 days, there was a considerable diminution in the size of the tumor; in four weeks the goitre was entirely gone. In the fifth case—a goitre with a cyst—the ingestion of thyroid extract caused the complete disappearance of the parenchymatous part of the tumor; the cyst, however, resisted the treatment. With this patient, the circumference of the neck decreased 7 cm. (say 3 inches).

The sixth case concerned a man who had been afflicted since 6 years with a goitre of the size of a child's fist, on the right side of the neck, and causing a displacement of the trachea and an obstruction to respiration. After four weeks' treatment, the respiratory disturbances ceased; the swollen lobe of the thyroid resumed its normal consistence and dimensions, and the circumference of the neck had diminished 5 cm. (2 inches).

Finally, with three other patients, goitres as large as an orange diminished in size under the ingestion of thyroid extract.

The three cases not benefited by this treatment had already reached the stage of cystic or colloid degeneration when they came under this treatment. The remedy, it is said, was always well supported, excepting in one case.

The author thinks that the phenomena of intoxication may be avoided by administering the thyroid extract once every 8 to 10 days only, and in doses not exceeding 10 grammes (2½ drs.) for adults and 5 grammes (1¼ drs.) for children.—Dr. P. Burns, in *Sem. Med.; Am. Med.-Surg. Bull.*

AUTO-INTOXICATION.—S. Schwalbe (*Real-Encyclopädie d. ges. Heilkunde*, Bd. iv. 1894,) after referring to the investigations of v. Jaksch and Kobert states that auto-intoxication includes every poisoning of the body in which the poison as such is not introduced from without. There are retention and noso-toxicoses, the latter being subdivided, as they are, or are not, produced through microbial agency. Recently the opinon is gaining ground that the toxic effects are often due to the poisonous substances in the bacteria themselves. Among the retention toxicoses the author speaks of Bouchard's investigations into the toxic action of the urine and alludes to the view that this is due to potassium salts. The exact cause of uræmia is still unknown. The alimentary canal is a further source of retention toxicoses. Intestinal peristalsis must be interfered with, and the contents should be fluid. Catarrhal jaundice belongs to the same group. The causes of cholæmia are multiple. It may also possibly be produced by the absorption of poisonous products from the intestine. Neither experimental extirpation of the thyroid gland nor the brilliant results of thyroid feeding prove that myxœdema is necessarily a mucinæmia. Glykæmia stands in the same relation to the pancreas as mucinæmia is supposed to do to the thyroid. Gout is a toxicosis or uratæmia. Cyanosis and severe cerebral symptoms are the expression of auto-intoxication from the respiratory tract. An auto-intoxication due to suppressed insensible perspiration has not been proved to exist. The noso-toxicoses are, according to many, the auto-intoxications strictly so-called. These consist in acids, gases, ptomaines, leucomaines, tox-albumens, enzymes. The source of most poisonous metabolic products lies in albumen. (The specific products of micro-organisms are not included in this article.) Migraine and tetany

probably depend on auto-intoxication from the alimentary canal. The author gives some details of ammoniæmia, hydrothionæmia, acetonæmia, and the intoxication due to the organic acids, and refers to the excretion of poisonous products by the urine in acute and chronic diseases.—*Br. Med. Jour.*

THE DIET OF EPILEPTICS.—The influence of diet upon epilepsy is a matter of peculiar importance in the treatment of the disease. In a certain sense epilepsy is always reflex. The starting point of a fit must be looked on as an extrinsic irritation, and in many cases it arises from indigestion. Errors in diet, however, probably influence epilepsy in other ways than this. The portion of food which is absorbed may be injurious, besides that which, remaining undigested, acts as an irritant, and there is a good deal of clinical experience in favor of supplying a minimum quantity of meat in cases of this sort, not on account of it producing indigestion, for it is often digested quite well, but because of its imagined effect in increasing the "irritability" of the nervous structures—a somewhat hypothetical property, but one based on the same sort of rough observation as is the well-recognized relation between corn and skittishness in horses. The interest of this subject has led us to make inquiries as to the food given to the patients at the epileptic colony at Chalfont St. Peter, and by the courtesy of the secretary we have been furnished with the daily dietary for a fortnight. Breakfast was on each day the same, consisting of oatmeal porridge, with new milk or sugar, tea and bread and butter. Dinner consisted of roast or boiled or hashed beef or mutton, with cabbages and potatoes, followed by a rice, sago, tapioca, suet, or jam-roll pudding. Tea was accompanied with bread and butter or dripping, or sometimes golden syrup or currant cake. Supper generally included some pudding, with milk and bread, varied occasionally with soup instead of pudding. On Friday fish was given instead of meat. It must be noted that all the inmates are men. At the present time they are nearly all engaged in outdoor work for a considerable number of hours a day, which probably enables them to assimilate, without difficulty, a somewhat freer diet than would be possible in other conditions; and it is not improbable that the improved nutrition, due to the combination of active work with a dietary better than could be digested in a sedentary life, may be a not unimportant factor in relieving the disease.—*British Med. Jour.*

MEANS OF COMBATING THE PENETRATING ODOR OF THE SWEAT AND URINE OF CERTAIN PATIENTS. —It is well known that oil of turpentine taken by the mouth imparts to the urine an odor of violets; but it is not generally known that, by prolonged administration of this drug, the intolerable smell of patients suffering from incontinence of urine may be suppressed. According to Dr. Brassert, Assistant to Dr. H. Emminghaus, Professor of Psychiarty at the Medical Faculty of Friburg-in-Brisgau, it is sufficient to take ten minims of rectified oil of turpentine in a little milk or water three times daily to cause the odor of urine to promptly disappear completely, and replace it by the scent of violets to the great satisfaction of those around the patient. This measure, which has long been employed with invariable success of Prof. Emminghaus' wards, may be continued without inconvenience for several weeks, and is contra-indicated only in cases of ulcers of the stomach, gastric catarrh and nephritis, or when the oil of turpentine determines dyspeptic or other morbid symptoms.

This treatment is of great value, especially in cases, so frequent in private practice, in which the arrangements and constant care, necessary to keep a patient afflicted with incontinence of urine in a state of perfect cleanliness, are more or less lacking.

Another deodorant, which is also successfully employed in the psychiatric wards at Friburg in the case of patients whose cutaneous secretions are particularly offensive, is the daily administration of a bath, in which three or four grammes ($\frac{3}{4}$—1 drachm) of permanganate of potassium have been dissolved. Such baths do not in the least affect the general condition of the patients, but under their influence the nauseating odor which they exhale rapidly disappears.—*Med. Week.*

SERUM THERAPY IN DIPHTHERIA. — AN UNSOLVED PROBLEM. — Highly favorable as have been the majority of the numerous reports on the serum treatment of diphtheria, signs are not wanting that their roseate hue may somewhat fade before the search-light of unimpassioned criticisms. It is now only a month since Dr. Hansemann, one of Professor Virchow's assistants, first drew attention to the liability of antitoxin to increase the diphtheritic tendency to nephritis, and both our home and foreign correspondents have given further evidence in this direction, as well as of other ill-effects in the shape of an increased proportion of deaths by cardiac failure, septicæmia, etc. Reports which simply give statistics of decreased mortality without any definite statement as to the mode of death, can afford us no information as to whether the effect of antitoxin on the vital organs is in excess of that which has been found to obtain under the older treatment. Since reliable information in this direction can only be derived from carefully recorded autopsies, it is to be hoped that in every case of death under this treatment a post-mortem examination will be

made, so as to prevent us falling into a Fool's Paradise, the ejection from which could not but be attended by ignominy.—*Med. Press.*

MORPHINOMANIA IN THE MEDICAL PROFESSION.—Dr. Jules Rochard, in the *Union Médicale*, draws a gloomy picture of the increase of the morphine habit in France and elsewhere. The habit, he finds, becomes incurable at the end of six months of indulgence. The fair sex and the doctors are, in his opinion, the most deeply addicted to morphine. He draws an unpleasant comparison between the behaviour of each kind of delinquent. Women, he says, delight in declaring how they indulge in this vice, and show ornamental hypodermic syringes to their friends Dr. Notet states that a lady having broken the needle of her syringe in a remote country village, wounded her skin with scissors and thrust the stump of the needle into the wound, injecting herself in this manner till a new syringe arrived from Paris. Men, Dr. Rochard declares, and especially medical men, the bulk of male morphine-injectors, take the greatest pains to hide their vice. Hence the precise number cannot be estimated. He believes, however, that doctors and persons associated with them form nearly half the total of men addicted to morphine.—*Ex.*

PERMANGANATE OF POTASH IN THRUSH.—Drs. Troitski and Karntski (*Gazetta Degli Ospitali*) regard the permanganate of potash as the most efficacious remedy in the treatment of thrush in children. Besides application of an alkaline solution they also employ the permanganate locally in solution. A two to four per cent. solution of the bicarbonate of soda may be employed for alkaline irrigation, or in very grave cases a saturated solution of this substance. Besides this the physician should touch, two or three times a day, the affected spots with the following:

R—Permanganate of potash .	25	0 (grs. iv.)
Distilled water	30	0 (℥ j.)

Under the influence of this antiseptic the disease rapidly disappears.—*Med. and Surg. Rep.*

TUBERCULOUS DISEASE OF THE PERINEUM, PROSTATE, ISCHIORECTAL FOSSA, AND RECTUM.—Mr. Arbuthnot Lane showed a case which he had treated successfully by the introduction of glycerine and sulphur into the cavities. The condition was one of many years' standing, and had been preceded by tuberculous disease of both testicles. He commenced the injection of glycerine and sulphur on September 4th, 1894. At the present moment his pain had gone, the aperture in the bowel had closed, the ulceration about the aperture had healed, the prostate was firm, and, except for the escape of a few drops of urine occasionally from a small perineal sinus, he was practically well. On September 4th he weighed 8 st. 11 lbs., now he weighed 10 st., a considerable gain of weight in such a short period.—*Brit. Med. Jour.*

AT this season of the year, when radical and sudden thermal changes are the rule, it becomes of vital interest to the busy practitioner to have in compact, ready form, such approved medicaments as meet the analgesic and antithermic requirements of the bulk of his patients. As pertinent we call attention to the following combination tablets: "Antikamnia and Codeine," each containing 4¾ gr. antikamnia and ¼ gr. codeine. "Antikamnia and Quinine," each containing 2½ gr. antikamnia and 2½ gr. quinine. "Antikamnia and Salol," each containing 2½ gr. antikamnia and 2½ gr. salol. And "Antikamnia, Quinine and Salol," each containing 2 gr. antikamnia, 2 gr. quinine and 1 gr. salol. These, together with the well-known "Antikamnia Tablets," of varied sizes, and "Antikamnia Powdered," constiaute indispensable factors in the armamentarium of the physician, and are more than ordinarily indicated in present climatic conditions.

SANMETTO IN DISEASES OF THE BLADDER AND KIDNEYS.—I have been in the practice of medicine for the past forty-four years, and say without hesitation that I have never prescribed any remedy that in its action is so near a specific in diseases of the bladder and kidney as Sanmetto, and particularly in cases of urethral inflammation combined with difficult micturition. Much might be said truthfully in favor of Sanmetto in all diseases of the genito urinary organs. I think it is the remedy for those diseases, and the best now in use.—D. CALKINS, M.D., East Lyme, Conn.

DR. CHARLES DAY, M.R.C.S., etc., 79 St. Mark's Square, West Hackney, London, writes, on January 17th, 1893: I have prescribed your preparation, Iodia, with very satisfactory results. Its power of arresting discharges was very manifest in a case of leucorrhœa, and another of otorrhœa. In the latter case, the result of scarlet fever in early life, the discharge had existed for many years. The patient could distinctly feel the action of the Iodia on the part, and the discharge gradually dried up.

WE are in receipt to-day of a copy of a special edition of Copp, Clark & Co.'s Canadian Almanac for 1895, printed for the enterprising corporation of H. H. Warner & Co., Ltd., of London, England, who are now sole proprietors of "Warner's Safe Cure." It is full of valuable information, and reflects credit on the publishers as well as on the enterprise of the English Company.

THE CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News.

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TORONTO, FEBRUARY, 1895.

Editorial.

TOXINES IN THE TREATMENT OF INOPERABLE MALIGNANT TUMORS.

In our January number, we gave a short notice of Dr. Coley's work in the treatment of inoperable malignant tumors with the toxine of erysipelas. He has an interesting article in *The Medical Record*, Jan. 19th, 1895, on the same subject. While apologizing for the subject being trite, he asks the profession to accept no statement until it has stood the rigid tests of scientific demonstration.

Since May last he has been using injections of the toxin of bacillus prodigiosus, mixed with that of erysipelas, at the time of using. Injections are made at intervals of 24 to 48 hours, and they produce sufficiently decided reactions in some cases to make the patient keep his bed for a few hours after each treatment..

Case III. was shown by microscopical examination to be a spindle-celled sarcoma; it was of very rapid growth, and of great size, involving "the larger portion of the left thoracic wall." Owing to the enormous size and extremely rapid growth of the tumor in this case, Dr. Coley did not believe that even an arrest could be accomplished; but on commencing the treatment, the improvement was very rapid, so that in about four months "no trace of the tumor could be found either in front or behind." This the author regards as his most brilliant case, and he notes as points of unusual interest, that all the injections were made within a radius of two inches; that the tumor disappeared entirely by absorption; and that only a single preparation of the mixed toxins was used throughout the case.

A case of tumor of the lower jaw, shown by microscopical examination to be carcinoma, was greatly improved in three weeks, but the improvement was only temporary, as were also the results in a number of other cases of carcinoma.

Dr. Coley has not yet made up his mind as to the efficacy of the treatment in carcinoma, and advises against its general adoption.

At the same time he notes, that the number of cases of carcinoma that have been permanently cured by attacks of accidental erysipelas, as well as the antagonistic effect in cases treated with toxins, should make us hopeful that soon we may achieve the same brilliant results with carcinoma that have already been shown in sarcoma. The results of the treatment in the hands of independent observers go to show the value of the toxins in sarcoma. Caution should be observed in the use of so powerful, and, as yet, imperfectly understood agent; but all cases of inoperable sarcoma should have a trial made, and, as a rule, improvement if it is to follow, will show itself in about two weeks. Individuals vary as to their susceptibility to this medicine as to others. No death has occurred from its use, though the Dr. thinks in one case the fatal event was hastened. He summarizes his cases treated thus far as follows:

"Up to May 31st, 1894, I had treated with mixed anti-toxins 25 cases of inoperable sarcoma, 8 of inoperable carcinoma, and 3 of sarcoma or carcinoma. In the cases of carcinoma, I had marked improvement in a namber of cases, but no cures. The cases were all very advanced recurrent tumors. In sarcoma, I stated that there were six cases in which I considered there was a reasonable hope of permanent cure. Six months have passed since then, and none of the six cases have shown any recurrence. . . . Of my total of 38 cases of inoperable sarcoma, therefore, 9 cases promise to be permanently successful."

The whole tone of Dr. Coley's paper is that of absolute fairness, and we can easily see that, had he been led away by too great enthusiasm as to the treatment, or allowed himself to be in the least sanguine, at any rate on paper, he could

easily have made a very different showing. The whole medical profession will await further developments along this line, and wish Dr. Coley and other workers in this hitherto hopeless field a hearty God-speed.

A NEW QUESTION IN MEDICAL JURISPRUDENCE.

The insanity dodge, to avoid the result of criminal acts, has been rife in courts of law for many long years, and especially so, we think, in the past two decades. Though so often tried it has not in many cases proved of much service to the malefactor; his mental condition having been shown, in nearly every instance, to have been such that he was responsible for his acts. The assumed disease never shows itself until after the commission of the crime, and the detection of the criminal; which circumstances together with the examination of the feigned insane person, by experts, nearly always, we may suppose, results in the placing of the suspect in the proper position as to mentality.

But hypnotism brings a new question before the medico-legal world, and one which, we are inclined to think, will prove an extremely difficult one to thresh out. Ernest Hart is on record as having said, "It has been shown that not only will a hypnotic subject perform unconsciously, under the influence of suggestion, acts which are dangerous to himself and others, and which are in themselves criminal—so that he can be made to thieve, to commit arson or to attempt violence—but that certain subjects can, there is reason to believe, be made to receive a suggestion having in it a time element. He can be told: 'On this day week, at a given time, you will return to the hypnotic state, you will go to a given place, you will steal such and such property, or you will attack such and such a person, and you will not remember who gave you the direction.'"

Criminal lawyers will not be slow to take up this statement by Dr. Hart, made, no doubt, after due deliberation as to the far-reaching effects of such conclusions placed before the world by one who stands so high in his profession. It can easily be seen how unfortunately placed the ordinary physician will be in criminal cases, as to any weight his evidence will have, if it goes against this plain statement of possibilities by Dr. Hart.

A case in point has recently been furnished by the result of a trial in Wichita, Kansas. A man, Patton, was killed by the self-confessed murderer, McDonald. McDonald was acquitted by the jury, under the instruction of the judge, on the ground that he had committed the crime while he was under the hypnotic influence of his employer, one Gray.

The evidence in the case showed that Gray was a man of strong personality, of a commanding presence, and dominating manner; that, he and not McDonald, had a *motive* for the killing of Patton, the latter having been a witness against Gray in a law suit of much importance. Under the dominating will-power of Gray, McDonald was shown to have been obliged to lie in wait for, and shoot Patton.

Not only did the court go so far as to acquit McDonald; but afterwards, in a separate trial, convicted Gray of murder committed by his agent, and sentenced him to death.

So now we may expect an epidemic of hypnotic suggestion, and more trouble over the much vexed question of *responsibility*. The psycopathist will not only have to decide as to the "mental disturbance arising from disease," the old and true test, but will have to weigh and measure the amount of *will* the criminal had remaining. And here, Mittermaier, who wrote long before hypnotism as such was ever heard of, will be in evidence, for he holds that the *will* is the most important factor in any given case, and "rebukes the English jurists for the rigid adherence to the antiquated doctrine, that whoever can distinguish good from evil enjoys freedom of *will*." In his opinion it is not a question as to whether the accused one was aware of the criminality of his action, but whether *he had lost all power of control over his actions*. Ordronaun practically agrees that *will* is the test of responsibility in any case.

Now, the opinion of such men, coupled with Dr. Hart's statement, makes what appears a hopeless muddle, in attempting the discovery of truth, the great purpose of the law. Why, for instance, might not the *victim* in certain cases be shown to have hypnotized the murderer and forced him to do the act, rather than that the murdered man

should commit suicide? Reese says, as bearing out this suggestion that, "Some have been known to commit murder with the avowed intention of receiving the punishment of death at the hands of the law, instead of inflicting it suicidally upon themselves."

The above considerations form subject matter for grave thought as to the advisability of making all hypnotic experiments illegal.

TREATMENT OF DIPHTHERIA WITH ANTI-TOXINE.

The past experience of the medical profession of this country with the fads of the German and French physicians has made us a little shy of the serum therapy. We have, therefore, avoided commenting on the new treatment until further evidence of its value are forthcoming.

We have long since learned to discredit the statements of the enthusiasts upon any subject, as we are almost always incapable of judging of the real merits of their work. In this instance it still remains for the honest men to determine the value of the anti-toxine treatment, the practical investigation of which presents many difficulties. It is gratifying to know, however, that the serum obtained from the horse, previously injected with pure culture or toxine of diphtheria bacilli, is free from any dangerous or deleterious properties; consisting as it does of serum of the animal, rendered immune by the effect of the most poisonous culture by the slow process of injections. It is quite harmless to the patient, therefore, provided we do not abandon or subordinate the old and successful treatment by well-tried remedies, such as the tincture of chloride of iron, persistently employed; hydrogen peroxide, the calomel treatment; the bichloride; quinine, and stimulants. One or more of these plans of treatment, with close watchfulness of the temperature of the room, absolute rest, good diet, with proper attention to the bowels and bladder, has given excellent results in the vast majority of cases. In fact, many of our most truthful and reliable members of the profession are willing to testify that they rarely lose a case under their favorite plan of treatment, provided they are called in its incipiency. When the posterior nares or larynx, or both, are involved, the mortality has almost invariably been quite large, under any treatment heretofore practiced. If the anti toxine can be shown to be of any great value in such cases, especially in laryngeal cases, and will prevent the death of any considerable per cent. of them, then, and then only, will it be accepted as a valuable addition to our armamentarium of cures for diphtheria.

If the reports be true, or even if the half that is told is true, the anti-toxine treatment has been of considerable service in this disease. Its real value, however, must of necessity be a matter of considerable speculation, inasmuch, as we have already stated, that so many claim to be able to cure diphtheria with ordinary medical treatments. Again, though the blood serum is harmless to the patient, it may be at the same time inert in many cases.

Can we be positive that the animal has been properly treated before the serum is obtained? Will the profession not be liable to the perpetration of fraud by those who may desire to speculate? To our mind there is but one way to be certain that we are procuring anti-toxine in the blood serum that we may demand; that is that the Government take hold of this matter and employ salaried officials to carefully prepare and preserve the serum for use as it may be demanded. The test of the value of the serum now before us is by no means reliable.

It is an established fact that the manifestation of the virulence of the disease varies very much in different seasons and in different localities. The attack of members in the same family varies. It is well known that when diphtheria attacks a large family of children, the first one taken with the disease is usually the one to die, if any; and that it becomes milder as it progresses in the family; whether this is due to the prompt treatment in the later cases, or to an attenuation of the virus, we do not pretend to say.

In epidemics the virulence is much greater at the commencement than towards the close. Another perplexing question, and one that seems difficult of solution, is to ascertain whether certain cases are diphtheria or follicular tonsillitis. The culture test only, in the hands of experts, is capable of determining this matter. With these truths before us, when are we to arrive at a conclusion regarding the efficiency of the anti-toxine treat-

ment? However, as we have before stated, it is harmless, and it may be of great value. Therefore, if we are not imposed upon, and do not have to "pay too much for our whistle," it is advisable to experiment with the new remedy.

SALICLATED IRON MIXTURE.—*Phila. Polyclinic.*

R—Sodii salicylatis, ...	ʒ iv.
Tinct. ferri chloridi, . . .	f ʒ iv.
Acidi citrici, ...	grs. x.
Glycerini, ...	f ʒ iss.
Ol. gaultheriæ, ...	♏ viij.
Liq. ammon. citratis, q.s. ad,	f ʒ iv. ♏.

Sol. sec. art. dos. f ʒ j or f ʒ ij.

Dissolve the citric acid and sodium salicylate in the liquor ammonii citratis. To the glycerine add the tincture of iron chlorid, and then mix the two solutions, finally adding the oil of gaultheria. One or two drams of mucilage of acacia would be a valuable addition with which to emulsify the oil of gaultheria.

In this prescription reaction takes place between the ferric chloride and sodium salicylate, resulting in double decomposition, giving iron salicylate, in the first solution. Care should be taken to keep the liquor ammonii citratis in slight excess, in order to have a perfectly clear solution of salicylate of iron.

Dose.—One or two teaspoonsful.

The prescription is used principally in the treatment of chronic cases of rheumatism or rheumatoid arthritis, in which anemiæ or evidence of impaired nutrition is a distinct feature. It is likewise employed in acute tonsillitis of rheumatic origin, and in acute articular rheumatism in ænemic subjects, especially if the patient has suffered from one or more previous attacks.

The ordinary dose in chronic cases in adults is a dessertspoonful four times a day; in acute cases the same dose is given every two hours until tinnitus is produced or decided amelioration has occurred, when the dose is diminished or the intervals between the doses lengthened.

THE SURGICAL TREATMENT OF EMPYEMA.—Ashhurst, JR., *Int. Med. Mag.*, gives as his opinion that no operation is justifiable unless the presence of pus is certain; and thorough treatment by medical agents, blisters, etc., has failed, or unless the symptoms, dyspnea, etc., demand immediate relief. Diagnosis is exceedingly difficult, and there are no absolute symptoms or positive signs, indicative of the presence of pus. Simple aspiration, tapping the sixth or seventh interspace, with antiseptic precautions, is preferred to the hypodermic syringe or exploring needle, as by the former the operator can promptly evacuate when a diagnosis is determined. If the fluid is purulent or becomes so, incision and drainage should be practiced, making two openings, and carrying a large drainage tube through the cavity from one opening to the other. Supplementing the drainage by washing out the cavity with a mild solution of boracic acid is advantageous. Resection of one or more ribs, when the lung is so bound down by adhesions that it cannot expand, in order to allow collapse of the chest-wall, and to promote healing by bringing costal and visceral layers of the pleura into contact. Because of the risk of necrosis, osteoplastic resection is not recommended.

CROUP AND ALL CROUPOUS DISEASES CURABLE BY PILOCARPINE.—Carl Sziklai, *Journal of Laryngology, Rhinology and Otology*, in an elaborate thesis read before the Ecole de Medicine in Paris, in which he describes the anatomico-pathalogical processes observed in croup, and its differentiation from diphtheria, concludes: 1. Pilocarpine is a specific for croup and all croupous diseases, *i. e.*, crupous laryngitis, crupous bronchitis, croupous pneumonia, croupous nephritis, croupous cystitis, etc. 2. The action of pilocarpine commences at once. In laryngitis croupsa cure is obtained in a few hours; in pneumonia crouposa in two or three days. 3. The result is certain, whether taken by mouth subcutaneously injected; also applied as suppositories or globuli vaginales. 4. In an advanced stage of laryngitis croupsa, with imminent danger to life, subcutaneous injection is preferred to internal administration. 5. By pilocarpine not only is duration of disease notably shortened, but mortality is *nil*. 6. In suitable cases, given early enough, it has a preventive action. 7. Pilocarpine can be given in twice officinal dose without fear of ill effects. The author's experience with this drug in treatment of croupous diseases extended over two and a-half years, and embraces over one hundred cases. His conditions and ob-

servations were corroborated by Herr Hofrat Biederl, of Hagenan, and Eschevich, of Graz.

CYSTITIS IN THE FEMALE, WITH SPECIAL REFERENCE TO TREATMENT. — John C. Hersler, Ph.G., M.D., *Univ. Med. Mag.* The chief indications for treatment are:

1. To remove any discoverable source or sources of irritation which act through the medium of the urine. This may be affected by a milk diet, and a discontinuance of the use of acids, pepper, etc. Any mechanical source of vesical irritation should receive appropriate treatment.

2. The urine should be rendered bland by the use of a milk diet, the ingestion of considerable quantities of water, the administration of potassium citrate, if the urine be too acid, or of boric acid if it be alkaline.

3. Pelvic congestion should be relieved by hot vaginal douches, placing the patient in the knee-chest position; and the correction of constipation.

4. The inflamed cystic mucous membrane may be relieved by the administration of boric acid, salol, ol. santal, copaiba, or creosote by mouth; or the use of injections of boric acid, carbolic acid, of nitrate of silver in suitable strengths.

5. The patient's general health should be improved by tonics, etc.

6. Rest in bed, especially in all acute cases, is absolutely imperative.

While advocating direct local treatment for cases of cystitis which do not readily respond to ordinary therapeutic measures, the writer advises that it should be employed with judgment and caution.

THE DISCUSSION ON THE VALUE OF THE DIPHTHERIA ANTITOXIN at the Berlin Medical Society, was concluded at the third session of the society. *Med Rec.* Dr. Schiemmann warned general practitioners against employing the antitoxine, which he said should be left to hospitals for the present. Professor O. Liebreich, director of the Pharmacological Institute of the University, criticised the published serum statistics. He said that the Berlin hospitals had always had a much higher percentage of deaths from diphtheria than the Berlin town practice. This was because, broadly speaking, only serious cases were brought to the hospitals. But since the introduction of the serum treatment, a far greater number of cases—and cases of all sorts—had been brought to the hospitals, and so it was quite natural that the percentage of deaths had fallen considerably. He considered the serum treatment to be based on fallacies very similar to those which had formed the foundation of the tuberculin treatment. It would be interesting to find out, he added, what action on the organism injection of pure serum would have. Dr. Hansemann, in a few last words, stood to his view that antitoxin is not to be regarded as a specific for diphtheria.

AN American friend of mine, *Ed. Med. Times*, relates the following incident which occurred during his residence in one of the prohibition States. A practitioner in a small country town, where the sale of liquor was prohibited, except on a *bona fide* prescription of a medical man, desired to prescribe some whisky for one of his patients. The chemist to whom the prescription was intended to be sent being a somewhat scrupulous person, the doctor scratched his head and said that he feared unless he took particular pains his patient would not be able to get the prescription dispensed. Therefore, he wrote the same in the following manner:

℞—Spts. Frumenti q.s.

and at the bottom he added the following lines:

Please give the bearer the above-named potation,
He's a pretty good chap and employed at the station,
The liquid he craves is known as frumentum,
And the name at the bottom will tell you who sent 'im.
The letters q.s., to be very explicit,
Is a medical dodge known as quantum sufficit,
But if a special translation you crave for,
'Tis simply this—give him all he can pay for.
Now do not refuse this my poor requisition
For I'm sound on the goose and an old school physician.

It may, perhaps, be as well to add that the prescription was duly dispensed. When the Local Option Bill passes I have no doubt that many of us will be called upon to prescribe for similar cases and earn many a fee thereby.

THE VALUE OF REPEATED LAVAGE AT SHORT INTERVLS IN OPIUM POISONING.—Hamburger, *Johns Hopkins Hospital Bulletin*, reports a case of opium poison in a Chinaman, illustrating the importance of repeated lavage. It was thought that all the

poison had been removed from the stomach at the first washing, but two subsequent washings, performed at intervals of several hours, yielded alkaloidal reactions. This reaccumulation of the alkaloids must have resulted from an excretion by the gastric mucous membrane, for it has been shown that it is in the stomach that the elimination of morphine proceeds most actively. In view of this fact, the writer concludes that repeated lavage to remove the alkaloids as fast as they are eliminated must certainly be a life-saving process, whether the poison has been taken by the mouth or hypodermically. The washing should be practiced at short intervals, and the sooner this can be done after the opium or morphine has been taken the better.

CANNABIS INDICA.—This drug, the most active of non-opiate anodynes or soporifics, which was very popular years ago, although little the fashion at present, is deserving of a large share of professional favor, *Med. Rev.* The principal cause which led to its disuse was fear of its toxic power, though there has never been a case of poisoning recorded from its use. Its effect on the system is most marvellous. It causes sleep, overcomes spasms, relieves pain and all nervous irritability, and that too within a few moments after administration. Its soothing and curative effects upon the nervous sympathetic system are great, and there is no one agent that will restore the equilibrium of nerve motion more quickly. The placidity of repose that is produced by this narcotic is rapid and to the point. Further, it does not check secretion or tend to constipation. It does relieve fatigue and arouse vital action, and can and should be given freely until the effect desired is apparent.

ERGOT FOR THE NIGHT SWEATS OF PHTHISIS.—Goldendach, *Br. Med. Jour.*, thinks that the night sweats of consumptives are not simply due to fever, and that their real cause has not yet been fully explained. Many remedies have been recommended for them—quinine, acetate of lead, atropine, hyoscin, brandy, rubbing the body before sleep, or using a powder composed of starch, talc, and salicylic acid. Most of these Goldendach has tried and found wanting. On considering the part probably played by the vasomotor nerves, he determined to try the effect of ergot against night sweats, and in most cases found the result very satisfactory. He usually gives one or two 5 grain doses of powdered ergot before bed time, and the cases are few in which this remedy is found quite useless. He has, moreover, never seen any harm result.

BASSINI'S METHOD FOR RADICAL CURE OF HERNIA.—This method consists essentially in the following procedure: The sac is carefully dissected out, ligated, the hernia reduced, and the sac ligated and cut off as close as possible so that it will retract into the abdominal cavity. The internal oblique and transversalis muscles are then stitched back to Poupart's ligament, the cord being drawn aside in the meantime. The cord is then laid over these muscles, and a roof and a new canal formed by stitching the skin to the superficial fascia over the cord. Some operators make three layers of sutures, placing the cord between the layers of the superficial and the deep fascia.

HURON MEDICAL ASSOCIATION.—The Huron Medical Association met in Seaforth on the 15th inst., with Dr. Turnbull, President, in the chair. Papers were presented by Drs. Campbell and Burrows, of Seaforth. Dr. Graham, Brussels, introduced the question of manner of collecting Medical Council fee, and this elicited considerable discussion. The subject of Medical Ethics was taken up by Dr. Wood, Mitchell, Dr. Bethune, Seaforth, and Dr. Shaw, Clinton. The annual election of officers took place and resulted in the appointment of Dr. A. Dalton Smith as President, Dr. A Bethune, Vice-president, and Dr. Mackay secretary-treasurer.

LOCAL APPLICATIONS IN DIPHTHERIA.—Dr. White, resident physician at the Willard Parker Hospital, New York, says, *Med. Times*, that his experience with peroxide of hydrogen in diphtheria, at that institution, had been very unfavorable. All the cases showed some sign of irritation from the peroxide. Cleansing with plain water or normal salt solution was best. Dr. Jacobi, New York, used only physiological salt solution, or lime water, introduced gently through the nose. He regards it as criminal to bore into the mouth of a child and try to pry open its jaws while it is struggling and becoming exhausted. Besides, the

affected parts cannot be reached in that way, while they can be through the nose.

NEW PARTNERSHIP.—Owing to the increase of work at Bellevue, House, Dr. Temple's private hospital, Dr. Temple has taken Dr. A. A. MacDonald into partnership with him in connection with his hospital work. Although Dr. MacDonald's partnership with Dr. Temple is limited to the hospital, yet his experience in gynæcology has been very extensive, and he will prove of valuable assistance to Dr. Temple, and relieve him, to a certain extent, of the great demand made upon his time in connection with the hospital. We are pleased to know that Bellevue House still continues in popular favor with the profession throughout the city and Province. Dr. Temple's long connection as a teacher of gynæcology and abdominal surgery, and his great practical experience in addition to the experience of Dr. A. A. MacDonald will ever command for the institution that confidence and esteem from the members of the profession which will ensure its success.

WEST TORONTO TERRITORIAL DIVISION ASSOCIATION.—The annual meeting of this association was held in Broadway Hall on Jan. 12th., at which a large representation of the members of the Division were present. The subjects of lodge practice, account collecting (including a black list of bad pay patients) and repetition of prescriptions by druggists, were discussed, and committees appointed to consider each of these and report at the April meeting.

The election of officers resulted as follows: President, H. T. Machell; 1st Vice-President, A. A. Macdonald,; Sec.-Treas., Geo. H. Carveth; Council: A. McPhedran, J. Spence, J. Ferguson.

The next regular meeting of the Association will be held in Broadway Hall, on Wednesday, April 10th. at 4 o'clock.

THE INFLUENCE OF CHLOROFORM ANÆSTHESIA IN OSTEOMALACIA.—On the ground of an experimental study of the effect of chloroform in ten cases of ostemalacia made at the clinic of Prof. Schauta, Dr Latzko arrives at the following conclusions:—*Wien. Klin. Woch.*

1. In the majority of cases chloroform anæsthesia is followed by marked improvement of the symptoms of osteomalcia.

2. This improvement always took place rapidly.

3. That in almost all cases, however, after a variable time the condition again changed for the worse, and this was usually coincident with the appearance of the menses.

TO CLEAN NICKEL PLATE.—Articles of nickel or nickel-plate may be cleaned, *Lit. Dig.*, by laying them for a few seconds in a mixture of one part sulphuric acid and fifty parts alcohol, washing with water, rinsing with alcohol, and rubbing dry with a linen rag. This process cleans perfectly, and should be especially useful on plated articles, on which the usual cleaning materials act very destructively, cutting through the plating and causing it to flake off. The yellowest and brownest nickeled articles are restored to pristine brightness by leaving them in the acid solution for a quarter of a minute. Five seconds are usually sufficient.

FLATULENT DYSPEPSIA.—Flatulency, or simple eructations of tasteless gas, after eating or drinking the least quantity, is a terrible bore to many people, Dr. Livesey in *Med. Sum.* Everything they eat or drink seems to create gas in the stomach—all is *ventis* at *preterea nihil.* Well, here are three prescriptions with a little advice that may help the tried physician's patience, and the more tried patients' patience, who has been swallowing drugs *ad infinitum* with no relief—he or she still eructs. Flatus generally results from the excessive formation of gas; then let us try sulphurous acid, strychnine or nux vomica, etc.

℞—Acid sulphurosi, ... ℥ i-ij.
Tr. nucis vomicæ, ... ℥ j.
Tr. card. comp., ... ℥ ss.
Aquæ, ... q. s. ad. ℥ iv.—M.

SIG.—One teaspoonful in water after meals.

Or, in atonic cases—and these cases may generally be atonic, and a local stimulant to the stomach is needed with an anti-fermentative and antiseptic agent—then creosote is an admirable remedy. Give half to one hour after meals. It may be combined with bicarb. of soda or subnitrate of bismuth, somewhat after this formula:

℞—Creosote, ... gtt. x.
Bismuth, subnit. or subcarb., . ℥ ij.
Mucil. acacia, ... ℥ v.—M.

SIG.—Mix well and give two teaspoonfuls about one hour after meals.

Pepsin or lactopeptine may also be required—any physician can combine either of these articles with creosote, bismuth, etc., to meet the case or his views. Powdered charcoal with soda or bismuth or magnesia, rhubarb and a little ginger or capsicum often act well, temporarily at least, till the stomach is toned up by other agents; a few drops of oil of cajuput put in sugar often relieves.

PUERPERAL CONVULSIONS.—Charpentier states, *Med Annual*, that if, during pregnancy, there is albumen in the urine, however small the amount, an absolute and exclusive milk diet should be insisted upon from the start. It is, *par excellence* the preventative treatment of eclampsia. If a convulsion occurs, and the patient is vigorous and very cyanotic, she may be bled to the extent of 16 ounces, and then chloral and milk given as soon as possible; if she is not strong, the chloral alone is sufficient. Labor should be allowed to begin spontaneously, and to progress without interference.

ICTHYOL IN PROSTATITIS.—This substance introduced into the rectum by injection or suppository has proved very beneficial in prostatic inflammation, *Rev. Méd.* Amelioration of the symptoms quickly occurs, pain during defecation, urinary uneasiness, etc., disappear, and the gland returns to its normal condition. The suppositories contain about 5 grains icthyol, and one is used night and morning.

THE VAGUS AND THE SECRETION OF ACID BY THE STOMACH.—Leubuscher and Shafer, *Centralblatt f. Innere Medécin; Med Age*, who are duly corroborated by Pawlow, Schumova and Krehl, have proved by experiments that section of both vagi below the recurrent laryngeal nerves induces waste, loss of appetite and ultimate death. In animals in which such section was performed no free hydrochloric acid was found in the stomach, and the gastric juice exerted little digestive action.

FIFTY-THREE IMMORTALS.—The name of Dr. W. T. G. Morton has been inscribed on the base of the dome of the new chamber of the House of Representatives of Masschusetts, along with fifty-two other sons of the State, selected as representing the highest favor of the Commonwealth. It will be remembered that Dr. Morton was the discoverer of the safe use of ether as an anæsthetic. The honor done his name is none too great, and has been, to say the least, somewhat tardy.

HEADACHE.—Lauder Brunton calculates that 80 to 90 per cent. of all headaches are due to defects of vision (hypermetropia, myopia, astigmatism, disparity in the local distances of both eyes, deficient power of convergence). Ten per cent. are caused by bad teeth and about five per cent. by affections of the nose, ears or scalp, and other factors, The headache of the first group is usually seated in the forehead, the temples or the occiput; where the visual power is not the same in both eyes it frequently attacks the weaker side.

PHENACETINE IN URINARY AFFECTIONS.—Dr. W. Holladay, *La Semaine Med.*, has employed phenacetine successfully in treating nocturnal incontinence of urine in children, as well as to decrease the frequency of micturition in prostatic subjects, and especially when there is co-existent cystitis. In children the remedy is taken on going to bed, in a dose of four grains; in prostatics one may administer eighteen grains, also on retiring.

PILOCARPINE IN ALCOHOLISM.—In alcoholism, Dr. Josham recommends, *Prov. Med. Jour.*, one-third grain doses of pilocarpine hypodermatically, and declares its "sobering effects are remarkable;" sleep ensues, and the patient wakes up a perfectly rational being. "The tense, red, bloated countenance and bleared, congested condition of the eyes pass away, the features become calm and easy, the skin soft and clear."

"THE DOCTOR."—We have recently received a copy of this now celebrated picture. It is issued by the Arlington Chemical Co., Yonkers, N.Y., and is printed in fourteen different colors, in imitation of oil painting. It is a beautiful thing for office or study, and will be sent to any one sending $1 to the above Co., including their bright little paper "The Factotum."

HEADACHE.—

℞—Caffeini citrat., } āā . . . ℈i.
Ammon. carb., }
Elix. guaranæ, ... ℥i.—M.

Sig.—Teaspoonful every hour until relieved.

CHAPPED HANDS AND FACE, *Gaillard's Med. Jour.:*

℞—Tr. benzoin co., ... ℥ x.
Alcohol, ... ʒ ij.
Aqua rosæ, ... ℥ xxx.
Glycerine, ... q. s. ad. ʒ j.

M. Sig.—Apply to chapped surfaces at night, after they have been washed with soap and warm water and thoroughly dried.

A second application is rarely required. This remedy is equally efficacious in the treatment of fissured, bleeding and sore lips.

FOR THE GREEN DIARRHŒA OF INFANTS, *Practitioner:*

℞—Acidi lactici diluti, ... ʒ iv.
Tincturæ limonis, ... ʒ j.
Syrupi,
Aquæ, āā . . . . . ʒ ij.

M. A teaspoonful thrice daily after suckling.

NEURALGIA.—For stubborn neuralgia try the following, *Med. Reprints:*

℞—Antipyrine, ... ʒ jss.
Caffeine, ... ʒ ss.
Ext. cannabis ind.,
Ext. aconiti, ... āā gr. ijss.
Hyoscyami hydrobromat., . . . gr. ½.

M. Ft. capsules No. xxx. Sig.—One every two or three hours.

GONORRHŒA.—Vatier, *Therap. Leistung; Brit. Med. Jour.*, recommends a combination of antipyrin and corrosive sublimate as an injection for gonorrhœa:

℞—Perchloride of mercury, . 1 part.
Antipyrin, ... 100 parts
Distilled water, . . . 10,000 parts.

The injection should be used four times a day, and retained as long as possible. The addition of antipyrin prevents smarting.

VOMITING OF PREGNANCY.—A writer in the *Lancet* says: "I have not failed once in many years, by a single vesication over the fourth and fifth dorsal vertebræ, to put an end at once to the sickness of pregnancy for the whole remaining period of gestation, no matter at what stage I was consulted. The neuralgic toothache, and pruritis pudendi of the puerperal condition yielded as readily, and to one application.

CORN CURE.—

℞—Cocaine hydrochlorate, . . 2 grs.
Salicylic acid, ... 30 grs.
Alcohol, ... 120 minims
Solid ext. cannibis indica, . 8 grs.
Collodion, ... 120 minims

Apply to the corn by any convenient means.

CHRONIC GONORRHŒA, *Marcus:*

℞—Hydrarg. ox. flav., ... grs. iv.
Lanoline,
Vaselin alb., ... āā ʒ ss.
Ol. olivæ, q s.

Apply to urethra by means of flexible French bougie of suitable size.

INSECT BITES, *Medical Age:*

℞—Ammonia water, ... 45 minims.
Collodion, ... 15 minims.
Salicylic acid, ... 1½ grains.

One drop to be applied to each spot affected.

RESOLUTION OF CONDOLENCE.—At a meeting of the Toronto Medical Society, held January 24th, a resolution expressing the sympathy felt by every member with the widow of the late Dr. J. E. White, in her recent and terribly sudden bereavement, was unanimously adopted, and a committee composed of Drs. Wm. Britton, and N. A. Powell was appointed to convey the same to her.

We have received the first issue of a new medical journal, *The Canadian Medical Review* The staff consists of Drs. W. H. B. Aikins, A. B. Atherton, J. H. Burns, G. Sterling Ryerson, J. Ferguson, Albert A. Macdonald, and D. W. Montgomery. We wish the new journal every success.

HÆMORRHOIDS.—Tuttle uses the following solution as an injection fluid. He never injects more than four minims at a time, even in the largest hæmorrhoid.

℞—Ac. carbolici . . . . . ʒ iss.
Ac. salicylici . . . . . ʒ ss.
Sod. bibor. . . . . ʒ i.
Glycerin . . . . . *ad* ʒ i.

THE USE OF ICE IN ASTHMA.—Dr. Sangree has succeeded in cutting short, *Bulletin Gen. de Therap.*, a spasm in a severe attack of bronchial asthma by applying ice over the course of the

pneumogastric nerve at the root of the neck. Five minutes after the application the spasm relaxed completely, and the patient slept, after having been four days without sleep.

FOR BRONCHIAL ASTHMA.—*Provincial Med. Jour.:*

R—Extracti stramonii, ... gr. ⅛.
Potassii iodidi, ... gr. v.
Ammonii carbonatis, . . . gr. iv.
Tincturæ lobeliæ æther. . . ♏ v.
Aquæ chloroformi, . . . q. s. ad ℥ss.

Misce et fiat mistura.

SIG.—A tablespoonful from every four to six hours.

BORO-SALICYLIC SOLUTION introduced by Cesaris and Carcano, as an antiseptic, *Merck's Med. Rep.*, contains to every litre (say quart) four grammes (1 ⅗) each of boric and salicylic acids. Its therapeutic value has recently been tested in an Italian hospital and found superior to that even of corrosive sublimate. The addition of the boric acid renders the salicylic acid solution more permanent.

AN ANTIDOTE TO HYDROCYANIC ACID.—The *Lyon Médical, N. Y Med. Jour.*, for October 4th says that M. Johann Antal, a Hungarian chemist, has discovered a new mineral compound, nitrate of cobalt, which promises to be a very efficacious antidote in cases of poisoning with potassium cyanide or hydrocyanic acid. Tried first on animals, this product has since been employed, always successfully, in more than forty cases of accidental poisoning.

PERSONAL.—The report that Dr. Wm. Osler had accepted the Deanship of McGill Medical Faculty is not true. The Dr., although a Canadian, finds more congenial work in Baltimore.

Books and Pamphlets

ON CHOREA AND CHOREIFORM AFFCTIONS. By William Osler, M. D., F.R.C.B, Lond., Professor of Medicine, Johns Hopkins University, Baltimore, etc. P.p 120. $3.00. Philadelphia: P. Blakiston Son & Co. Toronto: Carveth & Co.

This is an exhaustive work on the disease so common and yet so little understood—chorea. The author well designates it an *olla podrida* Dr. Osler has drawn largely from all available sources, and the result is an admirable work which will be read with pleasure and profit by all practicing physicians.

SYLLABUS OF GYNÆACOLOGY; Based on the American Text Book of Gynæcology. By J. W. Long, M D., Richmond, Professor of Gynæcology and Pediatrics in the Medical College of Virginia, etc. Philadelphia: W. B. Saunders. Toronto: Carveth & Co. Pp. 132. $1.00. 1895.

The author had three objects in view in compiling this syllabus: First, to be used as notes by lecturers; second, to enable students more intelligently to follow and remember the lectures, and finally, as a convenient reference, for practitioners. In certain cases the author differs from the American Text Book of Gynæcology, and has added to it according to his judgment.

It is very conveniently arranged, paged to show the corresponding pages of the larger work, and figured to show where illustrations are to be found. A very handy book for lecturers, students, and practitioners.

THE DYSPEPSIA OF PHTHISIS; its Varieties and Treatment. Including a description of certain forms of dyspepsia associated with the tubercular diathesis. By W. Soltau Fenwick, M.D., B.S, Lond., M.R.C.P., Lond. Assistant to the Evelina Hospital for Sick Children. London: H. K. Lewis, 136 Gower St. Toronto: Carveth & Co. 1894.

This work is a detailed description of the dyspepsia of pulmonary tuberculosis. The investigations on which the book is based have been carried on since 1887, and deals not only with the stomach, but also with the other parts of the whole alimentary tract.

The work shows a vast amount of study and personal research on the part of the author, and may be considered the best and latest on the subject in hand. And when we consider the immense importance of *nutrition* in tuberculosis, and that so long as a patient can keep his weight, or better, increase it, there is always a fighting chance of his throwing off his disease, we shall appreciate the interest which should be taken in the subject of indigestion by every practicing physician.

THE CANADA LANCET,

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

The LANCET has the Largest Circulation of any Medical Journal in Canada.

Original Communications.

THE TREATMENT OF STRANGULATED HERNIA.

There is probably no affection attacking our race that is such a menace to life as strangulated hernia; there is certainly none that becomes so fearfully aggravated by delay. Since the introduction of antiseptics and the advent, of what is termed, modern surgery, we have had a reduction in the death-rate after most operations in almost every department of our art; notwithstanding all this the mortality after operations for strangulated hernia is, perhaps, greatly higher than is generally appreciated. In 940 cases operated upon consecutively in St. Thomas, Guy's and St. Bartholomew's hospitals, the mortality was 43 per cent., the death-rate being nearly equal in all three of these institutions. The mortality at the London Hospital, according to Treves, is at the present time nearly 50 per cent.; one may therefore conclude that the mortality in the four largest London hospitals is not less than 44 per cent. Of 85 cases of herniotomy in the Manchester Royal Infirmary during a period of 12 years, the mortality was 44.7 per cent. Prof. Connor, of Cincinnati, furnishes an analysis of 33 herniotomies, of these 12 recovered and 21 died, a mortality of 63.6 per cent. Rushton Parker, of Liverpool, reports 61 cases of strangulated hernia operated upon with a mortality of 40.9 per cent. Although statistics are to some extent misleading, it will be found that in most large hospitals where all cases of operations are reported and nothing concealed, the mortality after cutting operations for strangulated hernia, still remains high, and has not apparently been diminished by modern treatment.

*Read before the Ont. Med. Association, June, 1894.

Mr. Jonathan Hutchinson has lately drawn attention to the unsatisfactory results following operations for strangulated hernia, and severely criticised surgeons who advise operations without a careful use of the taxis in cases where the contents are in a fair condition. He made the astounding statement that in the London Hospital, which had the largest hernia practice in London, or perhaps, anywhere, in 1861, 33 per cent. of operations on strangulated hernia were fatal. At St. George's Hospital at the same time 30 per cent. were fatal. At the London Hospital now 50 per cent. of those operations were fatal. Mr. Hutchinson further states that modern operative treatment could nowhere show as low a mortality as 30 per cent., that the fatality after operations upon hernia should have remained the same, or actually increased during the past 30 years is not in keeping with the advance in other branches of our art, and is a standing reproach to our boasted modern surgery. To what then is this high mortality due? It requires little experience to teach the practical surgeon that in the early performance of kelotomy lies its great safety. The high mortality is to be ascribed to the length of time elapsing between the date of strangulation and the operation undertaken for its relief. It is not so much the operation but the delay that kills. In many cases the early management has been bad, the hernia possibly not made out for one or two days, taxis used unskilfully or persevered in too long. In spite of all that has been taught concerning the importance of early operations, kelotomy seems to be regarded even yet by some practitioners in the light of a last resource, and one that is unsafe to use until the symptoms have persisted for days. Of late years, however, the teaching in our colleges has been in the direction of advising not only early operating but avoidance of too prolonged use of taxis. Its dangers although increasing with the age of the strangulation, have, it is to be feared, been greatly exaggerated. Mr. Hutchinson is of the opinion that the present hig mortality in London is due to the surgeons not using the taxis at all.

	NAME.	AGE.	SEX.	VARIETY.	DATE OF OPERATION.	CONTENTS.	TIME STRANGULATED
1.	Mrs. —...	88	F..	F.	.....	B. & O.	6 days.
2.	Mrs. C. ..	40	F..	F.	March, 1888.	B.	3 days.
3.	Mrs. V....	42	F..	F.	April, 1888..	B. & O.	2 days.
4.	Mrs. N....	40	F..	F.	Dec., 1890...	B.	3 days.
5.	Mrs. M....	50	F..	F.	Nov., 1891...	O.	48 hours.
6.	Mrs. O. ..	65	F..	F.	July, 1892...	O.	24 hours.
7.	Mrs. B. ..	44	F..	Ing.	Dec., 1893...	O. & B.	24 hours.
8.	R. S.....	19	M.	Ing.	Dec., 1890...	B. & testicle.	8 hours.
9.	C. H.....	52	M.	Ing.	Feb., 1890...	B. & O.	6 hours.
10.	I McM...	42	M.	F.	June, 1892..	O.	5 days.
11.	S. M.....	49	M.	Ing.	Feb., 1887..	B.	5 hours.
12.	R. M.....	50	M.	Ing.	May, 1882...	B.	20 hours.
13.	S. W.....	63	M.	Ing.	Aug., 1893..	B. & O.	3 days.
14.	Mrs. S....	65	F..	Ing.	April, 1893..	O.	2 days.
15.	Cheighton	76	M.	Ing.	March, 1894.	B.	2 days.
16.	Mrs. P....	48	F..	F.	May, 1894...	B. & O.	12 days.
17.	Mrs. G. ..	70	F..	F.	No operation	B.	uncertain.

	TIME OF RECOVERY.	REMARKS.		TIME OF RECOVERY.	REMARKS.
1.	Death	Peritonitis 2nd day	10.	2 weeks...	
2.	5 weeks...		11.	2 weeks...	
3.	5 weeks...		12.	4½ weeks..	
4.	5 weeks...		13.	Death	8 hours' shock, gut wounded.
5.	3 weeks...				
6.	2 weeks...		14.	2 weeks...	
7.	2 weeks...		15.	Death	Third day.
8.	5 weeks...		16.	Death	Gangrene (artificial anus made).
9.	5 weeks...		17.	Death	1 m'th after nature had formed an arttificial anus

Comments.—The table shows an analysis of 17 cases of hernia with 16 operations. Of these 12 recovered (6 males and 6 females), 4 died (2 males and 2 females), as well as No. 17 upon whom no operation had been performed. In the former 2 had been strangulated three days, one (an omental hernia) five days, and in 3 others, two days. Of the remaining 6 cases 2 had been in a condition of strangulation one day, and the remainder from five to twenty hours. Of the fatal cases, one had been strangulated six days, 1, twelve days; 1, two days, and another two and one-half days.

Of the operations, eight were performed on males and eight on females. Of these, eight were for femoral ruptures with two deaths, and six for inguinal, with two deaths. The youngest operated on was 19, and the oldest 76 years. Three were between 30 and 40; seven between 40 and 50; one between 50 and 60; two between 60 and 70.

Of fatal cases, one died on the third day from supposed peritonitis, but there was no autopsy; another in eight hours from shock; one in three days from exhaustion, apparently, who was 76 years of age, and suffering from hemiplegia at the time of the operation; the last in thirty hours, from exhaustion.

One of the herniotomies was for femoral rupture in the male; one for inguinal in the female. In all the other cases operated upon the inguinal hernias were in males and the femoral in females. In six of the cases the sac contained both bowel and omentum, in five, bowel only; in four, omentum; in one, bowel and endescended testicle, which was removed. In most of the cases where omentum occupied the sac it was adherent, a ligature was applied above the adhesions, and after resection returned to the abdominal cavity. In No. 13 (report), the bowel was wounded accidentally in relieving the stricture, Lembert's cutures were applied and the wound enlarged to cleanse the peritoneal cavity. The operation was prolonged, owing to this unfavorable complication, to one hour and a-quarter. Death took place in eight hours, apparently from the shock. The sack was opened in every case but one. In No. 16 (report) alone was there a certainty of gangrene, and an artificial anus made. No. 10 (report), the omentum looked suspicious; it had been strangulated for five days, but the patient recovered. In No. 1 the bowels looked dark and doubtful, but was returned with a cessation of symptoms; the bowels moved during the night, pain and vomiting ceased, but she died on the third day of what the attending physician thought was peritonitis. In case No. 15 the hernia had been long irreducible with the bowel and mesentery firmly adherent; the stricture was relieved, but no attempt made to sever the adhesions. Death ensued; the age was 76. The operations extended over a period of 12 years from May, 1882 to May, 1894. An attempt at radical cure was made in 75 per cent. of the cases. In 1, 13, 15, the patients being much exhausted, and the necessity of a rapid completion of the operation plain, the sac was left alone and the wound closed. My experience of strangulated hernia leads me to the conclusion that adherent omentum is present very frequently, adherent bowel rarely. The former condition was found in ten cases, the latter in one only. The omentum generally in addition to being adherent, was found matted together, and so altered in structure that it was thought best to remove it

by drawing down the now adherent portion, ligaturing with silk, and after excision return to the peritoneal cavity. In case 15, where the bowel and mesentery were both firmly adherent to the sac, the patient weak, suffering from hemiplegia, and 76 years of age, the operation consisted in relieving the stricture and closing the wound as speedily as possible.

In none of the fatal cases was there an autopsy. In the first, strangulated it was supposed about six days, peritonitis was alleged to be the cause of death. The 2nd., fatal result was due to shock after prolonged operation with slight wound of the bowel. The third died apparently of exhaustion on the third day. The fourth in thirty hours from the same cause. The real cause of death after herniotomy is usually difficult to make out in each case.

In the early part of the present century the introduction of chloroform displaced all other methods of treatment in strangulated hernia. We are told that the question in connection with the operation was whether or not the sac should be opened if taxis failed. It was considered the best practice to try the taxis patiently and for a considerable time, providing that the hernial contents were in a fair condition. If the surgeon suspected gangrene from the symptoms present, the advice was given to operate at once without any manipulation, and always to open the sac. The vital importance of early operations was insisted upon then as now, but the taxis was very much more prolonged and considerable force used. Either reduction by the taxis or Petit's operation, in the event of the former failing, was considered a great improvement on any operation necessitating an opening into the peritoneal cavity. Since the improved method of treating wounds has come into use, it is recommended in most cases to open the sac, thoroughly examine the hernial contents, and, after dealing with them as their condition requires, complete the operation by performing the radical cure. Later still, there has grown upon us a disposition to use the taxis only for a short time and very gently, and a decided preference for early operation. Some surgeons go the length of not using the taxis at all. No doubt this practice is fairly successful in experienced and skilled hands. We must bear in mind, however, when approaching this subject, that we are dealing with cases of emergency. Probably one half the operations of strangulated hernia are performed by general practitioners, far removed from hospital accommodation, without the necessary assistance; to this may be added inexperience in operating, bad sanitary surroundings, and possibly, imperfect light, In cases suitable for taxis (that is of not too long duration) where the patient is a long distance in the country, and the aid of a fellow-practitioner not at hand, I am disposed to think the physician would be justified in giving chloroform alone, and attempt reduction. As a general rule, however, the patient's consent should be obtained for a cutting operation before an anæsthetic is given, so that should the taxis fail, relief can be given by knife. Whatever line of treatment is adopted, there should be no excuse for delay, for every hour that elapses carries the subject of a strangulated hernia, nearer and nearer to his grave. I am one of those who believe that a patient should not be allowed to vomit a second time from strangulated hernia without attempting something for his relief. In all but two of the 17 cases reported, taxis has been used, and in the majority, persevered in for some time, but in none had any appreciable harm been done to the hernial contents. The bowel is capable of enduring a great deal of manipulation, provided the strangulation has not long been present and the taxis used in the right direction. All matters relating to the operation of herniotomy and its usual complications are so well understood and familiar to all that it would be out of place to refer to them. I make exception to the condition of gangrene and shall report the histories of the two cases from the annexed table where this was present.

Mrs. Geene, aged 70, admitted to hospital March 2nd., 1894, with fæcal abscess resulting from gangrenous femoral hernia. It was ascrtained from her family physician that he had been called in about February 12th. At that time the bowels had not acted for two weeks, though she was moving about and doing her own work. From this date to the 18th., she suffered from pain in the abdomen, vomiting and constipation. An enema caused an evacuation, after which diarrhœa set in and lasted for four or five days. On the 22nd of February she complained of a painful swelling in the groin, poultices were used and a discharge took place on the 26th, four days before her ad-

mission to the hospital. Delirious at times with a rapid and feeble pulse. She took nourishment fairly well and most of the discharges took place per anum, and for a time it was hoped she would recover. An eczematous eruption spread around the opening in the groin, and the patient gradually sank and died from exhaustion on the 26th of March. The autopsy showed omentum adherent to the femoral ring, as well as a perforated ileum about six feet from its termination, no spur could be seen and the fistula was the size of a thumb nail. There was a rather free passage towards the cæcum through which much of the discharges had passed.

CASE 16.—Mrs. P., aged 48. Was called on May 28, about 6 o'clock in the evening. The abdomen was greatly swollen, very tense and nothing had passed her rectum for 12 days, There was a swelling in the right groin in the region of the femoral canal. The patient was weak, pulse small and rapid. Two hours later she was admitted to the hospital, and under an anæsthetic, an incision made down to the stricture. Both bowel and omentum were adherent, the former gangrenous, and pus was present among the adhesions. The bowel was incised and an artificial anus made. Death took place in 30 hours.

Treatment of Gangrene.—These are the only two cases of gangrene of the intestine that have come under my notice, and as they afford an illustration of treatment by artificial anus, I have thought it my duty to draw particular attention to them. In looking up the literature of this subject I found the following taken from a valuable contribution by Runsohoff, of Cincinnati. Of 27 cases of hernia coming under his own observation, four were gangrenous, one being of the bowel and one of the omentum. Of 170 kelotomies for strangulation in Hagedorn's clinic, gangrene, real or suspected, was encountered but 25 times.

Of 486 cases collected from different sources, only 68, or about 14% were gangrenous. In the 170 cases of Hagedorn the omentum was dead in one only. This condition if so very rare that some surgeons doubt its existence altogether. In strangulated omental hernia the symptoms are said to be less severe, the pain, vomiting and constipation not so well marked. I have seen, however, as complete constipation in these cases as when the bowel occupied the sac. No doubt a number of omental hernias are irreducible and adhesions have formed long before the date of strangulation, the compressed portion of omentum receiving its blood supply from the wall of the sac beyond the point of constriction, and thus gangrene is averted. When this rare condition is met with the treatment consists in relieving the constriction, drawing down the mass, ligaturing, cutting off in sound tissue, and returning the stump to the abdomen. I am inclined strongly to the opinion that the cases in which gangrene is found are usually those that are reducible before strangulation, yet even here adhesions form around the seat of constriction, the septic products found in the sac are prevented from entering the abdominal cavity and the development of general peritonitis averted; but where this condition exists it is advisable in operating to use drainage and not close the wound. When gangrenous bowel exists, the question as to the proper course to pursue is a difficult one. Of late years, many recoveries have followed primary excision, with suture of the intestine. The old operation (formation of an artificial anus) is anything but attractive, and the per centage of deaths has been large. Much has been written upon the treatment of gangrenous hernia, and great difference of opinion manifested by surgeons. When the bowel is in what may be termed a doubtful condition it has been recommended by Paulsen to divide the stricture, and, after drawing down and covering the intestine with antiseptic dressings, await developments. I think, however, it is, as a rule, better to carry out the plan recommended by Treves, and replace it within the peritoneal cavity with a drainage tube under antiseptic precautions. When, after this treatment, the bowel gives way, experience has shown that the contents escape through the wound. Many experienced surgeons have met with cases in which the congestion of the bowel has been so extreme that they have doubted whether it were possible for repair to take place, yet its return led to complete reco very. As one meets with such a condition but rarely, it is difficult, or perhaps, impossible to say when the bowel is past the state of resolution. If the intestine, when exposed, be gangrenous, two courses are open to the surgeon, division of the stricture, followed by resection and suture, or formation of an artificial anus. Mr. Kendall Franks, of Dublin, has lately collected to-

gether a table of 222 cases of gangrenous hernia in which resection of the bowel had been performed, the mortality amounting to 48 per cent., while in a rather larger number, where the surgeon had made an artificial anus, the deaths amounted to 80 per cent. (*Med. Rec.*, Nov. 11th, 1893, p. 621). Zudler, of St. Petersburg, gives a paper of 289 cases in which primary resection was performed, and 287 in which an artificial anus was made. The first group showed a mortality of 49.13 per cent., and the second, 74.22 per cent. As to which method is the better, resection and suture of the bowel or the formation of an artificial anus, the decision must depend upon the local condition of the hernia and the ability of the patient to withstand a prolonged operation under an anæsthetic. In some cases of gangrene, more particularly of the femoral variety only a very small knuckle of intestine is involved, and this, after the formation of an artificial anus, closes frequently without any operation whatever, the gut being simply incised and the wound treated as an abscess, when a small fæcal fistula results and the contents of the bowel take their natural course with trifling danger of death from inattention. Banks strongly recommends that the stricture be not divided in these cases as the abdominal cavity is opened and exposed to infection from the putrid sac. In one of the cases presented, although no operation was ever attempted, nature performed all this for the patient, the small aperture discharging, and most of the intestinal contents passing her anus, and had the patient been admitted to the hospital earlier, or been younger in years, and had better care, I feel quite confident she would have recovered.

In other cases where there is a considerable section of the bowel in the sac where the strangulation has existed for several days, or been unusually acute, the portion at the line of constriction may be completely dead from direct pressure. The bowel beyond, may be gangrenous throughout or only in part; the centre of the coil, directly opposite the mesenteric attachment, is the portion that usually suffers. If the strangulation has been of long duration adhesions will be found inside the constriction, rendering the withdrawal of the bowel extremely difficult, after the stricture has been divided from inflammation and subsequent matting together of the hernial coverings. The intestine above becomes filled with a brownish fluid under going fermentation, and the gut enormously distended with gases, causing paralysis to some extent, and rendering the intestine incapable of recovery, even after the stricture has been relieved. The portion of intestine below the constriction is, on the contrary, decidedly pale and contains as a rule, only mucus. When delay has brought the hernia into this most deplorable condition the general symptoms are those of collapse, the muscular system relaxed, the urinary secretions diminished, the skin cold and moist, the heart feeble and the end not far off. When patients reach this state of exhaustion death is most likely to ensue, whatever line of treatment is adopted, for after three or four days of strangulation the chance of recovery is small. In cases so extreme an artificial anus should be made, having the advantages of a short operation and small amount of technical skill necessary for its performance; the sac should be freely opened up, well washed out with an antiseptic solution, the bowel freely incised, left in position and well-drained, after dusting the parts with iodoform. The weight of authority is in favor of not dividing the stricture for fear of infecting the peritoneal cavity. The experience in case 17 shows that this is not necessary. If one is sure about the limits of the gangrene, if the patient young and in a fairly good condition, and free from peritonitis, resection and suture of the bowel may be undertaken with a fair hope of success. When the operation is decided upon, the question arises whether it is to be effected at the site of the hernia, or through a median abdominal incision. In inguinal hernia the wound can be enlarged and will afford ample space but in the femoral variety the crural ring is so small, that it may be necessary to either divide Ponpart's ligament, or incise the abdomen in the median line. The mesentery is divided a short distance from the intestine and in a parallel line, the gut being controlled by the fingers of an assistant. The continuous Lembert suture is probably the best to employ, using fine silk both for the mesentery and bowel. The excision must be made wide of the gangrene so that the stitches shall lie in healthy tissue and great care taken to avoid infection of the peritoneum from the sac. One great objection to this operation is the time

occupied in its performance. The anastomosis button of Murphy may be also used with decided advantage, it is more easily inserted than stitches, requires little technical skill for its application and very much shortens the operation. Dr. Murphy, in *Med. Record*, May 26th, 1894, reports six cases for strangulated hernia, in which the button was used with five recoveries and one death, and six cases for fæcal fistula with no deaths. Dr. Walker, of Detroit, reports two cases with one death after it use. The union may likewise be effected by Senn's bone plates or Abbe's cat-gut rings. Probably the best method has not yet been devised, and as these appliances are not usually at hand when required, the suture will probably hold its place until surgeons are agreed upon one plan of treatment.

In carrying out the operation of resection some surgeons establish an artificial anus and close this after a day or two; this proceeding being applicable to cases where the collapse is severe or the the primary operation contradicted, owing to the limits of the gangrene not being absolutely determined. The advantages of primary incision, as compared to the formation of an artificial anus are great. After resection of the bowel the patient is restored to health in a few weeks, whilst in the latter the condition is most pitiable, a worrying eczema, the constant dread of a secondary operation, and the existing offensive discharges, leave the patient in so sorry a plight that death is almost preferable to existence.

Although, during the past six years, many cases have been successful after primary resection. yet each operation has its proper place. I am disposed to think that most of the successful cases after resection were operated upon rather early, and in comparatively strong patients. In many gangrenous hernias the general condition of the patient is so bad that it would be impossible for such an operation as intestinal excision to be borne. The proper course to be pursued in each individual case must be left to the judgment of the surgeon. Certainly resection of the bowel is an ideal operation and where the necessary assistants are at hand, and speed can be used, I think it should be tried provided the patient is not in a state of collapse.—J. WISHART, M.D., M.R.C.S, Eng., F.R.C.S. Edin. *London, Ont.*

STOMATITIS NEUROTICA CHRONICA.[1]

BY A. JACOBI, M.D., OF NEW YORK.

CASE 1.—C., fruit business, 42 years old, married; had one child which was stillborn. His father is alive, 78 years old; his mother 75. There are no other relatives except one sister, who is described as being perfectly normal, and one brother, whom I personally know. He appears fairly well developed physically, but has no whiskers, no hair on the pubes, none in the axilla, and the sexual organs are those of a child of 10 years. Both of these persons have had pemphigus in the mouth all their lives.

Patient appears to be pretty well developed, his complexion, though, is sallow; all his internal organs are in fair condition. His urine has a specific gravity of from 1.018 to 1.025; is always negative. He has always complained of a sensation of fatigue. He tires very easily, drags his limbs; cohabitation, which occurs but once a month, exhausts him; his hands were always weak, and moderate exertion results in tremor. He has trouble in keeping warm, and complains a good deal of præcordial pain, both on pressure and before his meals. This pain, as he expresses himself, was never so bad as when, under the orders of a physician, his diet was restricted. He has a melancholy temperament, and expresses now and then a number of hypochondriacal notions.

Up to his 13th year he suffered severely from urticaria. Since his 13th year this urticaria has disappeared, and has been replaced by pemphigus in the mouth. A few blisters will form quite suddenly, sometimes on the tongue, mostly on the cheeks, frequently in their lower parts, near the alveolar processes. They will burst after a

[1] While this paper was being put in print, Dr. O. Rosenbach published (*Deutsche med. Wochensch.*, June 28, 1894) a paper containing a "Contribution to the Vesiculating Affections of the Oral Mucous Membrane." Its conclusions are as follows: "The local pemphigus of the mucous membrane of the mouth is a variety of erythema exudativum multiforme, and ought to be called erythema bullosum. Whatever has been described as urticaria, herpes, etc., of the oral mucous membrane, is mostly this erythema bullosum. It is often complicated with the same eruption on the genital organs. It has a tendency to relapse."

The very variety of the symptoms, and the etiological identity evidenced in the histories of the cases, makes me believe that the name selected by me is more significant and appropriate.

little while; whitish ulcers will remain quite a long time and give rise to a great deal of pain, sometimes resulting in sleeplessness. Half of his lifetime, since his 13th year, he has been troubled with this eruption, which would come on without any apparent cause. He states that half of this period he had been free, not being able to explain why he should have the eruption nor why he should have been free.

About ten years ago, after having been under treatment three years, he had no eruption during the course of three or four years. At that time, and in some later periods, the medicinal treatment consisted of the internal administration of atropia, arsenic, and ergot. He claims that no local treatment ever benefited him except the application of concentrated sulphuric acid. He says it was a notion of his own, and asserts that it heals the sores in a few days.

Once, when the patient was as willing as I had been long ago, I sent him to a neurologist of well-merited fame and sound judgment. What he replied was a follows: "I could not make out the cause of the ulcers in C.'s mouth. If it is not a state due to chronic indigestion, and yielding to it, there are two possibilities to consider—one, that he is an epileptic; that the sores are due to attacks in which he bites his cheeks and lips, and of which he is wholly unconscious; secondly, that a morbid tendency leads him to use various acids, etc., in his mouth (and this he admitted he did), which keep up the ulceration or reproduce it. He seemed to me a queer hypochondriacal person, and gave me such an indefinite history that I suspected some mental taint."

Case II.—Mrs. W., 32 years old, the oldest of five children in the family. Her father has a very irritable, choleric temperament; her mother is placid, a woman of character and intellect. Her oldest brother has always had a systolic heart murmur, without any hypertrophy, the cause of which can be referred only to an insufficient contraction of the heart muscle. He is now a man of 28. He has for the last six years had peculiar attacks (epileptic?), the principal symptoms of which are slight contraction of the sterno-cleido-mastoid, which turns his head to the right side; scintillation and semi-unconsciousness, which is sometimes slight complicated with delirium, temporary forgetfulness, and limitation of his field of vision on both sides. These attacks will sometimes come on every month, sometimes not in six months. They are frequently the result of sudden turning of his head in one direction, and upward.

Another brother had meningitis when three years old, with all the symptoms of a tubercular meningitis. The disease did not prove fatal, but from that time on the boy had a feeble intellect, amounting to stupidity; was a bad scholar at school; had an irritable, violent temper, amounting to moral insanity when quite young; became more violent when he grew up, and had finally to be confined in an asylum for the insane, where he has been these many years.

A sister of the patient has suffered from *petit mal* since childhood, and has feeble intellect, still she is married. A younger sister died when five years old, of convulsions during pneumonia.

Patient was always neurotic; dysmenorrhœa has accompanied her through life; she has been married six years, and has been pregnant four times. The first pregnancy resulted in abortion, the second in the birth of a boy who is four years old and suffers from dyspepsia and constipation. He is a very neurotic boy, cowardly, melancholic, and talks much of his health. The third and fourth pregnancies terminated in abortion.

The patient wore convex glasses, No. 12, twenty years ago; wears No. 6 at the present time. She suffers much from herdaches, which do not appear to depend on the condition of her sight. Cephalalgia will come on mostly about the time of menstruation, which is irregular, sometimes scanty, sometimes copious, mostly behind time. Headache will also be produced by reading, thinking, and when the stomach is empty, also under the influence of anxiety or emotions in general. During her headaches she is pale; now and then, however, her forehead will be flushed. Her tendency to constipation will sometimes be interrupted by diarrhœa. Nausea is a frequent symptom; it is often complicated by vertigo. Her kidneys are normal, the urine now and then quite pale and of very low specific gravity.

Other neurotic symptoms are, frequent thirst, also nausea when she stoops and when at work over drawers. In such cases vomiting has been

observed which lasted a whole day. Music will confuse her. In the stores she will sometimes forget what she wished to purchase. Occasionally she complains of neuralgic sensations all over the face in every direction. She sees sparks. Whatever she does she complains she does mechanically. She has "to think terribly much."

Whenever she has such attacks of nausea, of vertigo, and during dysmenorrhœa, she has a sudden eruption of vesicles in her mouth of a size from a lentil to a pea, preceded by local redness. They burst very soon and leave behind them a sore surface of grayish-white color, which feels a little harder than the normal neighborhood, the hardness evidently depending on a fibrinous exudation into the surface. It takes many weeks before these sores heal. Fortunately they are never numerous. In a number of instances only one would appear. She has had these attacks very frequently since her thirteenth year. Menstruation did not show itself before the fourteenth. The only times when she has been perfectly free were during pregnancy and during a trans-Atlantic voyage some four years ago and an absence of about six months.

CASE III.—W., stationer, 31 years old; never had eczema or other cutaneous diseases; never a chill; has regular bowels; boasts of general good health, and has a great many local and general complaints. He is a good sleeper, his organs appear to be healthy, his urine has a specific gravity of 1.023 and is negative. He smokes but little, but both cigarettes and pipes. Boasts of not being a nervous man. His mother, however, was "quite nervous," and an only sister died of œdema glottidis at the age of 31 years. He has been addicted to masturbation from early life until a few years ago. For two years has had attacks of palpitation, which last three or four days, during which breathing is more or less difficult. His heart is of normal size, the sounds feeble; there is no murmur, no hypertrophy. He complains of his stomach, which has been bad three or four years; of slow digestion, and of attacks of vomiting some years ago. He eats rather fast, and takes alcoholic beverages from time to time. The gastric pain he complains of is in the median line. He has it mostly when the stomach is empty. The pain leaves him after eating and returns after an hour or two. His diet does not appear to influence this pain; as he expresses himself, he has pain after everything and is painless after everything.

When he presented himself in March, 1894, he gave the following history: During the last days of 1890 he was sleepless, from no apparent cause. He committed no indiscretion in his diet, but on the 1st of January, 1891, quite suddenly he had what he calls canker sores on his left cheek; blisters sprang up which opened soon and left a white surface, which lasted weeks and gave him much pain. He says they travelled around the mouth on both sides, jumping over distances, and have not left him since with the exception of a few days about Thanksgiving Day in 1893. Until that time he had a large number of such blisters and ulcerations of the size of peas and less, rising from what appeared to be a normal surface, on lips and tongue, besides the cheeks. All at once, about Thanksgiving, 1893, he could again whistle and remained well a whole week. Then blisters would spring up again on the outside of the lips; the angles of the mouth cracked, and blisters appeared in the oral cavity, terminating in superficial excoriations. Since the 1st of December, 1893, when the new eruption sprang up, its character has somewhat changed. Besides the large pemphigus vesicles in his mouth, the outside of the lips has participated in the process. There the vesicles are smaller, and rise from a hyperæmic surface. The cheek will swell up now and then, and headaches are not of uncommon occurrence. On April 2nd, he complained of a severe headache which had continued a week, and necessitated, and was eased by, prolonged sleep. This headache improved greatly since a few days previous to his call a frontal herpes showed itself. During that time his bowels and appetite had improved, but a symptom which had not been present before and staggered him much, was a very copious perspiration around his anus. On the 17th of May he reported this had disappeared; there was some pain on the right forehead; there was no pemphigus in his mouth, but a few pemphigus eruptions had appeared on the outside of his lips, which had lasted three weeks. He again makes the statement that he has not been free for a year, with the exception of that one intermission in November, 1893.

Pemphigus has amongst its causes heredity and certain affections of the nervous system. Kaposi[1] reports the case of a man of 22 years who suffered from pemphigus since his childhood. His sister, his mother, her brother, and half of the children of the latter were similarly affected.

In anomalies of the sexual organs, in pregnancy (Hebra, Bulkley), after confinement (Köbner), it has been observed; in lepra (Boeck, Nielen) it appears either as prodromes and may last for years, or it originates—both traumatically and spontaneously—on anæsthetic parts of the surface. The spinal cord has been found to be altered in chronic pemphigus; it is met with in chronic myelitis and in neuritis. But in all of these cases pemphigus was not found on the mucous membrane, as in those related by me, and the following:

Kopp[2] describes a case of what he calls trophoneurosis hysterica. It was that of a woman with a neurotic history and hysterical attacks. Amongst other eruptions she had herpes on the lower lip over the right mental nerve, and after that a small vesicle over the middle of the upper lip. This was followed by a large vesicle on the left side of the lower lip and a stomatitis with frequent hysterical attacks. Both vesicles and stomatitis disappeared in five days. Later on there was marked pain in the gums and on the mucous membrane of the mouth, followed by herpetic vesicles on the lower lip and a marked stomatitis, with fetid breath and frequent hysterical attacks. A week later there came another crop of herpetic vesicles on the lower lip, and the same condition would repeat itself at longer or shorter intervals. During all these attacks the temperature was normal. Alongside the vesicles there went a desquamating catarrh of the mucous membrane of the mouth, which recurred frequently and suddenly. Some months afterward, with a recurrence of the hysterical attacks and other skin affections, there was again herpes on the lips as before, and a marked stomatitis.

T. S. Flatau publishes,[3] under the head of chronic recurrent herpes of the oral cavity, the case of a merchant, 38 years old, who was well until his eighteenth year. Then he had typhoid fever and became addicted to alcohol; it is thus that the neurotic element may be surmised to have come into the case. Some months after his convalescence from typhoid fever he had an herpetic eruption on the lower lip, which soon healed. Since that time he frequently had similar eruptions on the mucous membrane of the lips, on the gums, near the floor and roof of the mouth, occasionally also on the tongue, mostly along the free margin posteriorly. These crops would last from eight to twenty-eight days. The longest time that he was ever free was one year, being then also relieved of the general irritability of his nervous system. Then the eruptions reappeared, and since that time the intervals between them have continually grown shorter. It was also observed that when his nose was clear there was no eruption, and when the latter appeared the nose was obstructed. He never had neuralgic pains, but salivation frequently. Patient shows marked mental depression, which he explains by the fact of his suffering from his trouble through so long a period and his impossibility to master it by treatment. There was no syphilis, no tuberculosis, no malaria. The simultaneous appearance of nasal symptoms might suggest a causal inflammation of the latter, but it is quite as probable that the mucous membrane of the mouth and of the nose was affected at the same time. But there is no means of arriving at a correct diagnosis of the original condition. The assumption of a peripheral or central affection of the trigeminus is hypothetical.

B. Mandelstamm[1] observed four cases of pemphigus of the mucous membrane of the mouth within ten years. In one of them the eruption was also seen part of the time on the skin. In all of them the treatment was unavailing. There was no systemic disturbance, but there was fetid breath and painful deglutition. Eruptions were found on the mucous membrane of the tongue, cheek, lips and throat. The sores were of a size from a lentil to a cent. They were grayish-white or white. The patches had sharply defined borders. Some were thick, like a membrane, and could not be removed without leaving a bleeding surface. The eruptions, when on the tongue, were usually found on the free border of the

[1] A. Eulenburg: Real. Encycl., 2nd ed., vol. xx. p. 291.

[2] Trophoneurosen der Haut. Inaug. Diss., Würzburg, 1891.

Deutsche med. Wochenschr., 1891.

[1] Berl. klin. Wochenschr., 1891.

inferior surface. Now and then they would appear on the epiglottis. Around the excoriations or membranes there was usually slight œdema, and salivation was not uncommon. Microscopic and bacteriological examinations were all negative.

The author has scanned the literature quite carefully, and comes to the conclusion that such cases must be very rare. A little more frequent are detachments of epithelium which remain membrane-like on the surface, and may resemble to a certain extent diphtheritic or croupous membranes.

With the exception of a few cases to be mentioned hereafter, the above cases of chronic pemphigus of the mouth appear to be all that have been observed. A few instances of pemphigus of the skin I now propose to mention briefly, and to accompany them with a very few remarks which are meant to elucidate the peculiar etiology of the affection.

Kirchner's case[1] was that of a man of 54 years, who was reported to have had a primary specific affection without, however, exhibiting secondary symptoms. For the past seven years he was frequently taken with pemphigus eruptions on arms, legs, face and neck, accompanied with general systemic disturbance and sweating. Sudden exposures to cool air after perspiration were presumed to occasion the attacks. At the Ninth Congress[2] of Internal Medicine a few cases of pemphigus were the subjects of discussion. Mosler claimed it as a vasomotor, Schwimmer as a trophoneurotic affection; as to its neurotic character there appeared to be no doubt. As the suspicion of its being of an infectious nature easily suggests itself, microbes were carefully looked for by Mosler, but not found. Nor was Landgraf more successful in this respect, in a case of chronic pemphigus of the conjunctivæ and the mucous membranes of the nose, fauces, and oral cavity.[3] A similar case was reported by Boer[4] and Chiari;[5] it was observed in a coachman of sixty-three years, who developed pemphigus on the mucous membrane of the larynx. Tuberculosis was suspected, but the diagnosis was dropped when subsequently the same eruption showed itself on the throat and mouth. No attempt is made in the publication to diagnosticate the cause.

Mosler's case is a woman of thirty, of pemphigus of the skin of the trunk and extremities, was decidedly of a neurotic character, in a neurotic family. The patient was always of delicate health, and had repeated attacks of epistaxis, fainting and epilepsy from her twelfth to her fifteenth year; afterward she suffered from chlorosis, dysmenorrhœa, hæmoptysis, and hæmatemesis.

Benedict observed pemphigus both after peripheral nerve lesions and central disturbances. So have Charcot, Leyden, and Eulenburg. Hebra quotes Dickson and Gilibert, who claim emotional excitement as among the causes of pemphigus, and admits the existence of a "pemphigus hystericus" which appears and disappears in combination with a series of hysterical symptoms. A unilateral case of the kind is reported by Pick (*Wiener Med. Presse*, 1880).

The majority of the neuroses of the integuments, which result either in a simple hyperæmia and œdematous tumefaction or in exudation reaching up to and into the epidermis, have been described as either urticaria or herpes. They are found on the skin almost exclusively. In severe generalized urticaria of the surface I have, however, repeatedly met with an œdematous swelling of the mucous membrane of the mouth; once I observed an acute laryngeal catarrh with croupous cough and dyspnœa, and once a very intense rectal tenesmus. Herpes febrilis I have seen quite often, when severe on the lip or chin, to spread over tongue and cheeks, exhibiting the same character in all localities, and following the course of a peripheral branch of the trifacial nerve. As a rule, however, both urticaria and herpes are limited to the surface. Hæmorrhages into the skin I have now and then found in exquisitely hysterical women. Pemphigus, as the literature of the subject proves, is but rare in that connection. Whenever found, it is on the skin almost exclusively, not on the mucous membrane. With the exception of the few cases given in detail, there are amongst the instances quoted above only those of Landgraff, Boer, and Chiari, in which pemphigus was limited to the mucous membrane of the oral cavity.

[1] Archiv f. Dermatol. u. Syph., Wien, 1892.
[2] Verhandl., Wiesbaden, 1890, p. 252.
[3] Berl. klin. Wochenschr., 1891.
[4] Archiv f. Dermatol. u. Syph., 1890.
[5] Wiener klin. Wochenschr., 1893.

Herpes is by no means rare; indeed, *acute* herpes ("zoster") is a frequent neurosis. Its form, however, is not always the same. In some eruptions of zoster the liquid exudation does not suffice for the formation of vesicles; in others the vesicles are very large, like those of pemphigus. These two varieties of dermatitis will sometimes resemble each other in many points. Mosler's case of cutaneous pemphigus began with small vesicles; within four or six hours they were of the size of pigeon's eggs. In one of my cases the pemphigus eruption was surrounded with a hyperæmic area, and that of Kopp's is of a similar nature. These instances prove the at least occasional presence of equal etiological and pathological conditions. Still, the great scarcity of pemphigus of the mucous membrane of the mouth appeared to be a sufficient reason both to describe my cases and to range them under a special heading. The neurotic character of my cases appeared to be self-evident. In two there is a positive family taint; in one the taint is but individual, but the neurosis finds its cause, amongst others, in masturbation, and exhibits a series of nerve anomalies. Even gastric symptoms, when they occurred in my cases, were easily recognized as neurotic. Other symptoms of the same nature were headaches, constipation, diarrhœa, nausea, local perspiration, and general neurasthenia. The temperature of the body was always normal. Contrary to what we see in herpes of the surface, which heals readily unless maltreated, pemphigus of the mouth is of long standing, and heals but slowly, and gives rise to a great deal of protracted pain and discomfort.

The marked family disposition which is evident in the history of two cases, reminds me strongly of what Carl Blumer has described under the heading of "hereditary disposition to vesiculation" (Prague, 1892). Valentine employed for the same affection the name of hereditary dermatitis bullosa; Köbner called it epidermolysis bullosa hereditaria; and Klebs, dysplasia vasorum. He found the blood vessels in a condition resembling that of hæmophilia; down to the capillaries they consisted pre-eminently of cells of embryonal structure, predisposing to hæmorrhages and exudation. Some of the cases described by Blumer and others (Goldscheider, Valentin, Ferd, Hebra, and Köbner) were complicated with urticaria, swelling of the lymphatic vessels and lymph-bodies, tumefaction and redness of skin surrounding the vesicles, general malaise when eruptions were copious, hæmorrhages into the vesicles, suppuration and purpura.

Selected Articles.

IS THE "GERM THEORY" A FALLACY? VIEWS OF A SURGICAL INFIDEL.

The *Buffalo Medical and Surgical Journal* for December contains an article by Mr. Lawson Tait, which was read before the Birmingham and Midland Branch of British Medical Association, October 11th, 1894, entitled "A Criticism of the Germ Theory of Disease based on the Baconian Method." At the outset, Mr. Tait says, he wants to remind those persons who now sneer at his views as those of a mere practitioner, that for twelve years he was a hard-working and enthusiastic microscopist, and that during that time he discovered one of the most selective methods of coloring tissue, and was the first man to show that fresh tissue of the greatest delicacy could be cut less than a thousandth part of an inch in thickness. He wishes to recall the fact that he unravelled the minute anatomy of the umbilical cord so completely that not a single fact has been added to or taken from his description during the eighteen years which have elapsed since its publication.

Mr. Tait says that when he entered college the cellular pathology was sweeping all before it, and everybody was mad after a new cell; special courses and special teachers were told off for cellular instruction, and a cellular pathology grew up which was to explain everything. Two parties existed, and of course fought bitterly, and the only real and permanent effect was that the unhappy students had to meet two sets of examiners, and to know two sets of answers to the same questions.

With the improvement in the method of making sections, curious little bright spots in quivering movement were seen between the cells, and were called "vibrating molecules." A molecular pathology grew up, but died with its one exponent. Finally the microscopists have resolved these vibrating molecules into a vast array of little beasts, and promulgated a "germ theory" by which everything is explained and under which everything is squeezed. It is no theory at all, but simply an amusing hypothesis, consisting of a series of interesting facts, misconstrued alike in importance and direction, and quite incapable of co-ordination or practical application.

Mr. Tait says the fact that the origin of certain diseases is due to a poison, has always been recog-

nized, but the suggestion of the immediate machinery has curiously varied.

The ancient Greeks and Hebrews believed that disease or a plague was a blow from an offended deity, and the Christian's favorite doctrine was, that it was a visitation from the devil; for both, the modern scientist has substituted the microbe, which is no logical advance over the belief of either. The ancient Jews were very practical, business-like and honest people, and could have written sanitary articles in medicals journals much better than some of their descendants of the present day do now. They knew the facts of sepsis, and had most elaborate schemes of antisepsis, whose stringency of detail were not much more ridiculous or probably much less satisfactory than many of those which have emanated from Lister himself.

Mr. Tait says, the "germ theory" originated from a supposed analogy between the processes of decomposition and disease. The law of decomposition has long been known; given a solution of organic compounds maintained at a certain temperature to which air has access, it will decompose. Pasteur added the fact that the process was always in the presence of, or on account of, numerous minute organisms which are capable of propagation. Pasteur did not invent a hypothesis, he did not formulate a theory, he did not establish a law, he simply added facts. The microbic theory of decomposition is untenable, as is shown by the homely instance of well-made jam. Here he says: "Let me remind you of the essence of inductive reasoning in Bacon's own words—a rule which has never been successfully evaded: 'The form which is sought can be detected only by a process of exclusion, by which we find a phenomenon constantly present, when the effect is present, absent whenever the effect is absent, and varying in degree with the effect. Such a phenomenon would be the form in question, the cause of the given effect or attribute.'" According to this salient definition, is the *causa causans* of decomposition the microbe? Most certainly not. Therefore we can have no microbic theory of decomposition. But if we proceed on true Baconian lines, we find that not only are the phenomena of decomposition not those of disease, but there is absolutely no analogy between them. Some appearances of analogy there are, but they are easily destroyed by careful examination. Take the huge carcass of an ox, let it lie in the field till the phenomena of decomposition are observed beneath the eyelids. At the same time. the same changes will be found active in the pericardium, though all possible communication by the blood current between two such remote spots has been destroyed. The spores of germs of decomposition are always present in our body, and they commence their victory as soon as death occurs. Throughout the whole nomenclature of disease there is none which affects the whole mass of the living body at once, and at a blow, as does decomposition.

Mr. Tait says that he has followed the researchers on the bacillus of tubercle with great care, because he had objected to a group of cases of abdominal diseases being designated as tuberculous peritonitis. Opening and draining these cases cures the majority of them, and in the characteristic tubercles in a great many of his own cases, the bacillus tuberculosis has been found, while in others it has not. Many of the former have recovered, while some of the latter have ultimately died of the advance of the disease. Hence he concludes that while the bacillus of tuberculosis may be a product of the disease, it is not its cause.

Mr. Tait says that ten years ago elecricity was unfortunately revived as a remedy for diseases, and that this time it was directed to the affections in the female pelvis, and that we were told that inflammatory effusions, purulent inclusions and solid tumors had melted away under the influence of the electrolytic current. His criticism of the proposal at the time was confined to the suggestion that, as inflammatory processes were pretty much the same wherever met with, he should be contented to believe the statement, and follow out the treatment, if he saw it applied successfully to a whitlow or ganglion of the wrist, and he now proposes that the same kind of test be put to the "germ theory" in the field of dermatology. Here the great bulk of the phenomena of disease are under the naked eye, and can be supplemented by simple, harmless, and perfectly justifiable experiments, and it is most disappointing to find that the whole result of previous investigation consists in numerous changes of nomenclature. and a blatant advertisement of nostrums. The skin doctors have ranged themselves into two camps, germists and anti-germists. They have quarrelled with each other like gynæcologists, and have settled nothing.

Mr. Tait goes into a long dissertation on typhus fever, which he claims is not due to a germ, but to overcrowding. He states that typhus is practically unknown wherever the population is below one hundred and fifty to the acre, but occurs with certainty when it is over two hundred. He says that typhus arises *de novo* upon appropriate provocation, and is speedily killed by cleanliness and an abundant supply of fresh air, which facts are in his opinion contradictory to the "germ theory."

Mr. Tait says: "It is probably the germ of some very ordinary fungus, sprouting with deadly growth from the pabulum afforded by the crowd—a suggestion made to me by the late Charles Darwin. At any rate, in this case the fulfilment of Bacon's canon is complete. The phenomenon, a population above a certain density is always present

when the effect, typhus fever, is present. It is universally absent when typhus fever is absent; and the effect, typhus, varies in degree with the degree of overcrowding. The phenomenon overcrowding is, therefore, the form in question, 'the cause of the given fact or attribute.' Littlejohn's facts and figures prove the law of the appearance and existence of typhus, the law of its variation, and they have established the fact of its extinction. You may as well establish a germ theory for this awful disease as for a leg of cold mutton."

Mr. Tait then takes up the application of the germ theory to the practice of surgery, and says that Lister, from his laboratory experiments, knew that a single spore admitted into a sterilized flask was quite sufficient to produce decomposition in appropriate contents, and permeated by a false analogy, he concluded that a single germ was equally potent in a surgical wound. Mr. Tait says, that being a very clumsy barber, he has no doubt that he has implanted myriads of germs in fresh wounds inflicted on his face while shaving; that no septic results have followed in his own case or in thousands of his fellow sufferers. He ridicules the technique of antiseptic surgery, and uses as illustrations of its absurdity two articles recently published in America. In one, the author says that he divides the umbilical cord about two and one-half inches from the abdomen, wipes the abdomen and the cord with a bichloride solution, firmly secures it with a sterilized ligature, and touches the cut end of the cord with a bichloride tablet.

"Sterilized gauze, sterilized bandages, and a properly sterilized cradle and nurse," says Mr. Tait, "secures the recovery of the germ-endangered baby, and no doubt a formal operation fee is charged after the danger is all over."

The other writer quoted gives minute directions for sterilizing the hands, instruments, ligatures, and dressings for the operation of lacerated perineum. Mr. Tait states that he has done the operation about fifteen hundred times, and has observed none of the directions nor used any of the measures advised by his American friend, and yet the statistics which have been published prove that his mortality is less than that of his antiseptic rival, as one is less than two hundred and fifty. Mr. Tait says that some may say that neither the division of the umbilical cord, nor the repair of a damaged perineum, are sufficiency serious operations to make any mortality at all. If such be the case, there can be no truth in the alleged germ theory; for the logical deduction of that theory is, that the entrance of the germ or germs into any wound whatever is capable of producing systemic septic evils and death.

Mr. Tait says that he has done a great deal of operative work, and has never used anything but absolute cleanliness; yet his published statistics have not yet been contravened or beaten in their record. He says he has challenged Sir Joseph Lister over and over again to compare statistics with him, but he has ignored him with a lordly indifference. He says that the details of Listerism change with marvellous rapidity, and before they are six months old are pronounced failures, and are replaced by something new. The last of all these numerous phases is the disuse of chemical destroyers of germs and the abandonment of antiseptic surgery, and the adoption of aseptic surgery, which is nothing but perfect cleanliness, which Mr. Tait has been preaching for years, and, forsooth, this is, then, the newest Listerism.

Mr. Tait says that after his early experience in surgery, it is a wonder he ever stuck to it; that, during his pupilage in Edinburgh, he saw thirty abdominal tumors removed without one single recovery, and, when he left the land of his birth, it was with one fully made resolution—that he would never open an abdomen. In Edinburgh, if he saw the amputation of a thigh in the Old Infirmary on Wednesday, there was a strong probability that the following week he would see the bared bone sticking through the anterior flap. If a breast was removed, an erysipelatory reddening of the flaps would very probably occur on the following day, and would be half way around the chest before the week was out, and the wound gaping, and everything going to the bad. He left Edinburgh, and has been engaged continuously for the past twenty-eight years in making wounds, and he has never seen a case of erysipelas in his own practice. This improvement lies in the separation of patients, plenty of cubic space and fresh air, and is in nowise the result of chemical germicides, which he never uses.

Mr. Tait says that it was Simpson who cried out most loudly for better ventilation and cleanliness, and against the use of dirty hands and sponges, and that he has been dead hardly these five and twenty years, and all his splendid work is as much forgotten as if it had never been done, and the glorious progress which has come out of it is given to a theory, which is not theory at all, but a phantasm, a system which has been proved an inconstancy and a broken reed, a thing which yields at every blast, either to scholastic logic or eclectic experiment.

As a surgeon, Mr. Tait stands pre-eminent, but he is amusing as a scientist, confusing as a logician, and abominable as a writer.

The epitome of his article just given has been laboriously dug from confused verbiage, and enucleated from digressions on electricity, dissertations on Baconian logic, enumerations of his personal success as an operator, and abuse of men who oppose his views.

Mr. Tait recognizes the existence of a poison which produces disease, but refuses to admit that

it is of a microbic nature. He insists upon the importance of cleanliness and upon the avoidance of contaminating wounds with dirt, but fails to say of what the latter consists. He prefers to deal in generalities, to speak of contagion as a condition, not as an entity. If it gratifies him to call by the name of dirt what his more advanced contemporaries have resolved into micro-organisms, it is a weakness of his brain, which should be pardoned on account of the cleverness of his hands. If, in practising cleanliness, Mr. Tait has practised aseptic surgery, so much the better for Mr. Tait; but he did it instinctively, purposelessly, not scientifically; and to have expected others to follow his example, for which he could give no reason, would be as illogical as to expect fruit from a tree which had no roots, or water in a brook which had no source.

The followers of Lister have, in the past, been guilty of many absurdities, and in their ranks are still found theorists who ride their hobbies hard. Many apparently contradictory facts still remain unexplained, and the results of experiments, which seem diametrically opposed, have still not been reconciled, but all this will be remedied in time. When germs can be examined microscopically, can be differentiated by their appearance, can be cultivated in the laboratory, and can have their effect, when introduced into a healthy organism, accurately foretold, the science of bacteriology is not a farce. When a germ fulfills the requirements of Koch; when it is invariably found accompanying a certain disease; when it can be cultivated from the tissues and bred in test tubes; when it can reproduce disease if inoculated into a second animal, and is again found in the inflamed part, it certainly would seem, to a reasonable mind, that it has a direct etiological relation to the disease.

It is, of course, impossible to demonstrate positively the truth of the "germ theory," but such is the case in many other branches of science, and is, therefore, no reflection upon medicine. No one would question for a moment the assumption of the truth of the "Atomic Theory," and yet, without that basis upon which to build, the proud structure which has been erected by the chemists would fall into chaos. It is impossible for the Christian to demonstrate the existence of a Deity, and yet, without the faith inspired by their belief, civilization would totter and barbarism would return.

The magnificent achievements of modern aseptic and antiseptic surgery amply refute his attack. Whether the "germ theory" be a fallacy or not, the faith inspired by its principles results in the application of methods which prevent septic complications, and is of untold benefit to mankind.—*Virginia Med. Monthly.*

MEDICAL TREATMENT OF THE DISEASES OF THE STOMACH.

Mr. President,—In the short time you place at my disposal I shall review the more important remedies available in gastric disorders, the principal symptoms attending them; and a few of the local affections, such as ulcer, hæmorrhage, and cancer. What I have the honor of presenting, is not claimed as new, or "modern," but is offered as what I have been, and am, in the habit of recommending and employing.

Some of the abnormal conditions of the stomach depend on anomalies of distant organs. Hyperæmia and catarrh result from disorders of circulation in the chest and abdomen. Incipient pulmonary tuberculosis, chronic pleurisy, particularly the diaphragmatic form, peri-bronchitis, emphysema, every variety of asthma, diseases of the heart and the great blood-vessels are frequently the causes of the various forms of dyspepsia. It is these causes which require treatment and not to the same extent the gastric disorders. Thus it is that the latter may be remedied by gymnastics of the chest, or by digitalis.

Irrigation through the stomach-tube is indicated, and frequently does good, when there is protracted nausea and inflation, and the taste is sour or bitter. To continue this treatment indefinitely is not indicated, or to rely on its continuation for its moral or psychic effort is injudicious, for a neurotic patient will not be influenced more by ten irrigations than by two. On the other hand, it is true that two or three irrigations will hardly suffice sometimes to clear the cavity of all the food that may have accumulated. Cases of sarcina are particularly obstinate.

Irrigations are certainly contra-indicated in most cases of gastric ulcer, of acute gastritis, except the cases produced by poison or fermenting food, in painful and in ulcerative pharyngitis, and they ought to be made with great caution when the sound has to pass a dilated heart, a large aneurism, or an elevated or strictured œsophagus. The tube should have a double opening at its lower end, it should be soft, and must not be carried far beyond the cardia. By measuring the distance from the chin to neck and along the vertebral columns down to the ninth dorsal vertebra the necessary length can be found. The tube may be moistened with warm water—vaseline and glycerine are nauseating to many—and is carried down to the œsophagus; then the patient is told to make the movement of deglutition, and repeat it when the tube reaches the level of the larynx. He must breathe regularly and hold his basin with both his own hands; 500 gm. of water, or warm alkaline water are then run in, once or several times; it is not the whole amount that will come up again, for

a small part will be absorbed in the stomach, and more is apt to escape into the intestines. A slight up and down movement before withdrawal prevents the mucous membrane from being caught and torn.

Irrigations are indicated when large masses of mucus cover the interior of the stomach and separate the ingesta both from the absorbent and the secreting epithelium. In these cases chloride of sodium and carbonates act as solvents. In bad cases of chronic gastritis solutions of nitrate of silver (1 to 2,000) will do good after warm water with carbonate of sodium (not the chloride) had preceded them; also warm water in which subnitrate of bismuth has been suspended.

Papayotin (Papain), the powder, or a five per cent. solution, digests meat. In an atonic and non-secreting stomach it is therefore an excellent aid to digestion. Such specimens of disintegrated meat and cheese I demonstrated to the State Society when ten years ago I detailed the effect of the remedy on croup membranes. My remarks on that occasion have been utilized contrary to my protest by a mercantile firm who advertise a preparation which they call papoid. How much papayotin is contained therein the gods and the firm's chemists may know. I do not, but I do know that the use of my name in the circulars is an unmitigated fraud.

Pancreatin, the ferment of the pancreas, transforms starch into dextrin and sugar, splits fat, when emulsionized in the pancreatic juice, into glycerine and acids, and peptonizes albuminoids in alkaline solution. In acids it has no such effect, indeed it is decomposed. Therefore I never comprehended what good it could do when introduced into the acid stomach.

Pepsin in water and hydrochloric acid dissolves albuminates. When the stomach furnishes none, or an insufficient quantity, for instance in anæmia, chronic tuberculosis, or scrofula, in old age, in convalescence, its medicinal administration is beneficial, inasmuch as it facilitates the digestion of nitrogeneous foods. But it is inert unless accompanied with dilute hydrochloric acid. Solutions in glycerine will keep in alcohol but a short time; therefore wines of pepsin which have been preserved a long time are liable to have but little efficacy.

Bismuth. The subcarbonate, subnitrate, salicylate or subgallate are less appropriate in gastric catarrh than they are in other forms of subacute or chronic gastritis, and mainly in ulcer of the stomach. It is a gentle and antifermentative protection to the mucous membranes and its nerve branches. The gastric neuralgia of the anæmic, the hysteric, and the pregnant are favorably influenced by it. In the same way, besides binding hydrogen sulphide, which is a potent cause of peristalsis, it protects ulceration of the intestines, prevents their reflex effect and relieves diarrhœa.

The merits of *nitrate of silver* have become dubious in regard to most of the claims advanced for it. It was expected to heal ulcerations and to relieve gastric pain. The main objection to its use was the fact that there is always so much sodium chloride in the stomach; that is true, but when nitrate of silver is to be used, the amount of salt in the stomach need not be larger than the physiological condition of the gastric surface requires. Therefore whoever is to take nitrate of silver must not before have taken salt with his food, and ought to have a fairly empty stomach. In that condition the mucous membrane of the stomach is as amenable to the action of the nitrate as that of the pharynx or nose. It is desirable to have a similar method of administration, or rather application, in all of these cases. Pills will certainly not be so reliable as a solution, and the dilution ought to be large enough to render the distribution of the solution over a large extent of the stomach probable. An adult may take from one-half to one grain in four ounces a day, a tablespoonful every two, or two tablespoonfuls every four hours. The smallness of the doses is no objection. The greatest dilutions, 1 to 2,000 to 5,000, are known to find their way most readily into and between the epithelia. To influence a large part or the whole extent of the stomach interior, a few grains of nitrate of silver in a pint of water may be employed for irrigation.

Charcoal, I am told, is a very disappointing drug. I do not share that opinion It is expected to bind gas, and so it does; but this property is nearly lost when it is wet. Besides, the charcoal mostly in use with us is vegetable charcoal, while the animal preparation is known to absorb thirty times as much as the former. I never prescribe anything but carbo-animalis. To have its full effect it ought to reach the stomach in its dry state if possible. That can in part be accomplished by giving the drug in wafers or in capsules.

Amara (bitters) are stimulants appropriate for atonic condition of the stomach, both primary and secondary, mostly in anæmia, chlorosis, and exhaustion by sexual excesses. The roots of gentian and calumba, the wood of quassia and of dandelion and Irish moss belong here. Their effect is but mild, their action by reflex on the secretion of the saliva is known but not marked, that on the secretion of gastric juice is doubtful. Thus it is that they are often administered in tinctures which contain ethereal oils and alcohol, both of which are more active. The latter do not agree with acute gastric catarrh and ulceration. One of the best known, for good and evil, is cundurango. In America it began its career in 1871, in 1874 in Germany. I well remember the stir it made in the newspapers of the day. It was imported by a

downtown firm from Ecuador and cured every case of cancer of the stomach. To return the compliment, the same firm exported large invoices of Scott's cancer remedy to cure the cancers of the stomachs of the people of Ecuador. Such is fraternity and solidarity. After a while, when the excitement was over, cundurango was found to be an excellent amarum. A decoction of 15 in 300, made after a maceration of twelve hours, so as to leave 150, acts quite favorably. So does the extract of cundurango, one or two grains of which may be administered five or ten times a day.

In the same direction are other active bitters and the aromatics, the mints, cardamon, caraway, cascarilla, mace, pimento, ginger, cinchona, pepper.

Most of us will prefer one, or very few, or none of the substances mentioned. When given in the tinctures or in extracts, they may be combined with adjuvants and corrigents, in liquid or pill form, with quinia, iron, etc. Some of us are still fond of orexin, the indispensable cure-all, the effect of which has always appeared doubtful to me. The best of all the bitters is nux vomica; its tincture, fluid extract, solid extract, and its alkaloid permit of many ways of administration and combination, with good effect.

Rhubarb in small doses has no cathartic effect, but through its gallic acid is rather constipating. In doses of from 2 ctgr. to 2 dcgr. several times a day it acts favorably in chronic gastric catarrh and nausea and vomiting depending thereon. In small doses it improves the appetite, particularly in scrofulous and rickety children, when feeble digestion or dyspepsia follows an attack of diarrhœa. The aqueous tincture of rhubarb which has been received from the German Pharmacopœia into our "National Formulary" is a good preparation. Adults take one-half to one teaspoonful after meals. Our aromatic tincture of rhubarb is a good preparation when the stimulating effect of alcohol is required.

Motory incompetency may be the result of gradual decrease of muscular strength in anæmia, slow convalescence, etc., or depend on a congenital, either general or circumscribed, insufficiency, but is most the outcome of a protracted catarrh and dilatation. It is quite frequently combined with insufficient secretion of gastric juice. These are the cases in which orexin has been recommended. Amara and diluted alcohol, spices, aromatics, internal douching, external douching, both cold and hot, massage, electricity, both externally and internally, appear indicated. Pepsin and hydrochloric acid are required when the secretion is more defective than the contractility.

Lack of hydrochloric acid results from defective innervation, in anæmia and convalescence, or from local causes; atrophy of the glands, cicatrices, or tumor. The secretion of pepsin is defective at the same time. Both have to be supplied in the shape of medicine. —*(To be continued.)*

CONJUNCTIVITIS—ACUTE AND CHRONIC.

This is, perhaps, one of the most obstinate forms of acute or subacute conjunctivitis to deal with, unless the cause is appreciated. It is best in all cases of conjunctivitis to examine the tear passages and ascertain their condition. If there is obstruction, treat the nasal end of the lachrymal duct by sprays or powders, and use mercuric bichloride (1 to 8000) on the conjunctival cul-de-sac. If this does not remedy the lachrymal obstruction, then open the canaliculus by the Bowman operation, thus giving free drainage. This, with the use of the antigermicide, will cure the condition. These cases, treated in the ordinary way by the application of astringents to the eyelids, will, as a rule, avail nothing, but speedily respond to the treatment outlined above.

Nasal conjunctivitis, by which we mean inflammation of the mucous membrane of the eyelids, due not to obstruction of the lachrymal duct, but to an interference in the free nasal breathing and ventilation of the head through the nose, is due in most instances to a hypertropic rhinitis, and, perhaps, to enlarged turbinated bodies. The symptoms of these cases persist even when the most approved methods of treatment have been used for simple conjunctivitis, and the redness of the eyelids and the blepharitis only gives way when the nasal obstruction and rhinitis is under control. We could cite many cases where this cause has been overlooked, and which speedily recovered on the treatment of the nose and throat.

Traumatic conjunctivitis is frequently met with as the result of the injury of the mucous membrane by the entrance of foreign substance, and which speedily gives way on the removal of the exciting cause. After exposure to the sun's rays, on the impact of air in sailing or rapid driving, we frequently observe a form of conjunctivitis, which we justly call traumatic. We have all seen, doubtless, the conjunctiva sun-burnt and air-inflamed. For these forms we use the application of cold compresses ten minutes at a time, four times a day, together with protecting colored glasses and moderate out door exercise: in fact, almost all the simple forms of conjunctivitis do much better in the air than when housed. Occasionally, in traumatic conjunctivitis, with moderate secretion, an eye lotion of alum and boracic acid, three grains each to the ounce of water, will be found efficient and soothing. Electric-light conjunctivitis comes under this class, and is now quite often seen, especially in those engaged in work where the arc light is used. Protection of the eyes by colored glasses and abstinence from the usual employment for a few days will usually rectify this difficulty.

In the treatment of all the forms of simple, acute, or subacute conjunctivitis, we are in the habit of prescribing applications to be made to the closed eyelids of cold water, by means of cloths or pieces of old linen These, dipped in cold water, or better still, placed on a piece of ice and then transferred to the eyelids. make a very soothing and beneficial form of treatment. Then a solution of alum and boracic acid, as mentioned above, is given the patient to use at home, two drops in each eye, twice daily.

Purulent conjunctivitis, is the most serious of all the inflammations of the membrane we have to deal with, and we know of nothing more sad than the picture so frequently seen of the helpless infant, but a few days old, presented for our care, with both cornea infiltrated, the eyelids bathed with pus, and the eyes hopelessly destroyed, when, if the appropriate remedies had been used, the child would have been saved a lifetime of misery. Another form seen in the adult is the purulent conjunctivitis caused by the germ of gonorrhœa—an exceedingly disastrous inflammation, and one that will destroy the eye within forty-eight hours unless treatment is very promptly inaugurated. The eyelids are very much swollen, and the skin red and glossy, and the secretion copious. In either the infant or the adult, if only one eye is affected, the non-affected should be protected and shielded from inoculation by means of "Buller's shield," which is simply a watch crystal held in position by means of adhesive plaster. Thorough cleanliness is godliness in this instance, and should be rigorously carried out; in fact, this class of patients should only be treated as in-door patients, and then isolated. All things used in removing the secretion from the eyelids should be promptly incinerated, and thus all further danger of contagion removed. The eyes should be cleaned as often as the secretion accumulates—every half hour, if necessary. The eyelids should also be opened and the secretion removed by the use of a small syringe, injecting through the cul-de-sac and over the eyeball a solution of mercuric bichloride (1 to 8000), in order to cleanse and, at the same time, act as an antiseptic. If the secretion is considerable and there is not much bleeding from the palpebral conjunctiva, applications should be made by the medical attendant to the everted eyelids of a solution of silver nitrate, ten grains to the ounce of water. This should be in many cases applied twice daily, and continued until the secretion begins to diminish, when the strength of the solution may be reduced to five grains and the applications made once daily. It is extremely important that applications of iced cloths should be kept up in the adult continuously for the first few days and in the infant as frequently as tolerated. The best way is to take a large piece of ice, wrapped in flannel, and upon this place small squares of old linen, and when they are thoroughly cold transfer them to the closed and inflamed eyelids. When the cold becomes too intense, the applications may be interrupted for a time, or when the cornea shows signs of lack of nutrition, they may be altogether omitted, and even warm compresses applied; this, however, is rare. After cleaning and making the silver-nitrate applications, it is best to fill the conjunctival cul-de-sac with vaseline, as it has been found to lessen the secretion and probably render the propagation of the germs more difficult.—Moore, in *Post Graduate.*

TREATMENT OF SPRAINED ANKLE BY ADHESIVE STRAPPINGS.

On May 16, 1893, a gentleman tourist from New York City called at my office for treatment of a severe sprain of the ankle, which he stated occurred in getting off a moving train three days previously. For the relief of the severe pain he had employed an anodyne liniment. On examination I found the right ankle greatly swollen, very sore and sensitive when the least movement was made, but although the symptoms pointed strongly to the presence of a fracture or dislocation, I was able to assure the patient, much to his gratification, that this was not the case. He was very desirous of having something done to enable him to continue his tour, as his time was limited. So forcibly did he urge upon me to fix him up in some way that my wits were put to a strain for some new plan of treatment, that his wishes might be satisfied. I thought of splints, of plaster of Paris, and other materials, of bandaging, laced boots, and crutches, and every method I could call to mind, stating the advantages of each to him for selection. None suited him, as he said all were too cumbersome, and he feared he could not travel with any satisfaction, having his wife with him.

He enquired if there was no other way of relieving him, stating that he would take the responsibility upon himself. I thought for several minutes of something new, when my eyes fell upon a roll of rubber adhesive plaster on my desk. The idea at once suggested itself that the ankle could be completely immobilized by cross strapping with the plaster. I offered my new plan to the patient, and he said "go ahead." I cut my plaster, which was one and one-half inches wide, into strips from twenty to thirty inches in length, as they were required. The first strip, about thirty inches in length, was carried from near the base of the little toe around the foot, then over the instep and around the ankle, making a spiral bandage. The second was started beneath the base of the great toe and carried over the instep,

crossing the first strap, then making the same spiral turn around the ankle up on to the leg. The third was started about half an inch behind the first strip, following its course closely until the turn around the ankle was reached, where it was made to slightly overlap the first. The fourth followed the course of the second, and so on until part of the foot, the ankle, and about six or nine inches of the leg were completely and securely encased with the adhesive plaster.

Over this dressing I then applied a thin bandage, merely to secure the plaster. After he had put on his stocking I told the patient to stand on the foot and try to walk, which he did to his entire satisfaction, without the least strain on the ligaments. He sent his wife out and purchased a slipper (as his shoe would not fit now) and was enabled to go about very comfortably. On the fourth day the swelling had completely subsided, and I applied new strapping, and he continued on his journey. I saw him several times during his short stay here, and he could not have made more satisfactory recovery (and perhaps not so satisfactory) had he been confined to his bed.

CASE II.—I had under treatment at the same time the proprietor of the hotel where this gentleman was stopping, who had sprained his ankle about one week previously. The patient had kept confined to his room with the ordinary dressings, but when I discovered the great advantage of this strapping by adhesive plaster, I removed the old dressing and applied the strips to his ankle also, and allowed him to go about with the same good results.

CASE III.—About three months later I employed this treatment in the case of a young lady, a pupil of the high school, suffering from a sprained ankle. She was able to go to school every day, and in two weeks' time had made a complete recovery.

CASE IV.—This was a Colles' fracture of the right wrist. I applied only a band of rubber anhesive plaster thrice around the wrist, and had the patient carry his arm in a sling, allowing the hand to drop. No other dressings were used. The results were perfect. No splint ever so scientifically constructed could have given better satisfaction.—W. H. Dukeman, in *International Jour. of Surg.*

THE TREATMENT OF ENDOMETRITIS.

Winckel recognizes clinically two forms of endometritis, the hypersecretory and the hæmorrhagic. Among the causes mentioned are bacteriological, (streptococcus, staphylococcus, gonococcus, and coli communis), infectious endometritis from typhus recurrens, croupous pneumonia, typhoid, dysentery, and acute peritonis, also a nervous form.

For the purposes of examination and application to the uterine cavity, dilatation is necessary; but no longer is it to be accomplished by the old methods of tents or graduated tubes, but with sterile instruments to effect rapid dilatation, followed by the insertion of the finger, then by the sound and applicator.

The simplest method is naturally irrigation, which is best suited to the glandular form.

Following Schultze, daily irrigation with three per cent. sodium solutions, to remove the mucous secretions by means of a simple catheter, followed by a two-and-a-half per cent. carbolic acid solution, and finally a one per cent. lysol solution.

To this list the author adds tincture of iodine two and a half per cent.; sublimate 1 to 5000, chloride of zinc, and alum, one-half to one per cent. solutions. His advice in light cases of glandular endometritis is to follow this general plan:

First, an injection of from one-quarter to one-half a quart of sodium solution (three per cent.), followed by (according to the cause) a two per cent. carbolic, or one-half per cent. lysol, or two per cent. silver nitrate, or five per cent. zinc or cupric sulphate, or aluminate of copper (five per cent. solution) into the uterus through an ordinary (or Budin's) catheter, the instrument being moved from side to side to allow the fluid to flow out. The instrument being removed, a tampon of iodoform gauze is placed before the uterus, and the patient allowed to rest an hour to avoid the colicky pains which may follow. If colic comes despite this precaution, or if there is unusual tenderness of the adnexa, then the operation is discontinued and a pause of from four to five days is enforced.

In light cases of fungoid endometritis with metrorrhagia, of bleeding from myomas, and parenchymatous hæmorrhages, Winckel injects the sesquichloride of iron into the uterine cavity, in which a dilatation is unnecessary. (He has pursued this plan for seven years in one case of myoma; injections four to five times a year.)

The use of medicated pencils of alum, zinc sulphate, cupric sulphate, etc., is not recommended, owing to their too caustic and destructive action. Applications should be made by means of a Playfair's sound or some similar instrument. In those cases which resist the foregoing treatment, the uterus is wiped out by means of the sound and a piece of cotton with either liquor ferri sesquichloridi, tincture of iodine, alum (one per cent. solution), or two and a half per cent. to fifty per cent. chloride of zinc.

As a final treatment in especial cases, applications can be made to the uterine mucous membranes with a Paquelin or electric cautery, or an electric stream may be passed through the uterus and abdominal walls by means of an electrode in

the uterus and one on the belly wall, one hundred to two hundred milliamperes being passed for ten minutes.

When the disease has resisted all local applications, as often happens, then resort to curetting if necessary, and this plan is followed by Winckel:

Always administer ether. Fix the uterus, dilate the cervix, curette carefully; then wash out the uterine cavity until neither blood nor shreds of membrame come away upon the applicator; then a sound is passed into the cavity with gauze soaked in liquor ferri sesquichloridi.

The cervix is now dried with absorbent cotton and the vagina packed with iodoform gauze.

The patient rests in bed from three to five days. Washing out of the vagina is all that is necessary. Only in cases of fungoid, or where there is strong bleeding, is a second application necessary. In purulent endometritis, after a month, the milder means are again resorted to.—*Ed. Therapeutic Gazette.*

MEDICAL NOTES.

Small doses of nitro-glycerine given for any cause, just prior to the menstrual epoch, will prevent the flow entirely.

The internal use of chloroform is very successful in colica pictonum.

A drachm each of camphor and chloral hydrate rubbed together, and added to an ounce of rose-water, is highly recommended as a local application for pruritus in any part of the body.

Gelseminum controls pain in the ovaries better than anything else, except narcotics.

Use black pins in surgical dressings; they will not rust and can be more readily seen.

In cases of vomiting from almost any cause, one-quarter grain doses of codeine usually answer exceedingly well.

Nitro-glycerine, alias trinitrin, alias glonoin, has been proved an efficient remedy for puerperal eclampsia in the dose of one-hundreth drop every hour.

Tincture of iodine of double strength, or one drachm to the ounce of ninety-five per cent. alcohol, when thoroughly applied by means of a feather, or better, by a camel's hair pencil, to boils, etc., will relieve all pain, and shorten the stages of supuration more than one-half.

The oil of cade is an old-fashioned remedy which was once used extensively as a cure for eczema and kindred disorders, with better results than many more recent remedies. It has cured many cases of alopecia.

Dr. Haumer has found that the application of chrysarobin in chloroform (1 to 10) to be most the successful treatment of psoriasis.

Do not neglect the use of the arsenite of copper in the treatment of the acute watery diarhœs of infancy and childhood. — *Medical Summary.*

A NEW INTRA-UTERINE IRRIGATOR, DILATOR, AND RÉCAMIER CURRETTE COMBINED.

During many years of an active gynæcological and obstetrical practice I have frequently met with cases of adherent or retained placental tissue where curetting and irrigating the uterus were necessary, and I have always found it difficult to obtain an instrument which possessed the combined qualities of effecting sufficient dilatation and irrigation of the cavity. I have, therefore, been led to devise an instrument which is simple in design and perfectly aseptic.

The subjoined cut shows the instrument both closed and partly opened. It is capable of carrying a steam sufficiently large to wash away *debris* to an extent not attained by any instrument heretofore in the hands of the profession. *C*, is practically a straight cannula, through which a rod an eighth of an inch in diameter can easily be passed for cleansing purposes; or a piece of sponge, attached to a wire supplied with an eyelet, can be drawn through, and the instrument kept clean and perfectly aseptic.

The instrument is as easily manipulated as any ordinary uterine dilator, and, when it is introduced into the uterine cavity and opened to its fullest extent, by gentle traction the uterus can be brought down without the use of a tenaculum. The instrument consists of two parts, the injector and a Récamier curette, held together by a modified French lock, *b*, the blades being kept closed to form the dilator by means of an adjustable spring.

Thanks are due to Messrs. Tiemann & Co. for the careful and skilful manner in which they have constructed the instrument, and it is hoped that it will prove useful in the hands of obstetricians and gynæcologists.—A. B. Adler, M. D., in *N. Y. Med. Jour.*

ON THE MODE OF DEATH IN CEREBRAL COMPRESSION, AND ITS PREVENTION.—Victor Horsley calls renewed attention in the *Quarterly Medical Journal*, 1894, vol. ii., part iv., to the fact that in fatal cases of cerebral compression death is due to respiratory failure. This has been experimentally demonstrated by a number of investigators, among the most recent of whom are Spencer and the author. Their results led them to the general conclusion that a rise of pressure within the skull caused a slowing and diminution of the respiratory movements, and later arrest of the same.

The three common causes of increased intra-cranial tension which have been submitted to surgical treatment are cerebral tumors, hæmorrhage, and inflammatory foci. In each of these sudden death is apt to occur from arrest of respiration, unless the pressure be relieved by trephining.

Four cases of intra-cranial tumor—three of the cerebrum and one of the cerebellum—are cited in illustration of the subject. In one of these death resulted from respiratory failure on the morning of the day appointed for the operation. In the other three cases the failure of respiration occurred on the table during the operation for the relief of the cerebral condition. In each instance the patient turned suddenly white, the respiration became extremely shallow for a few breaths, and then stopped altogether. Artificial respiration was at once resorted to, and the skull rapidly and adequately opened over the supposed site of the tumor with the trephine and bone forceps. In every instance normal respiration returned, the movements being a little shallow at first, but soon assuming their customary proportions.

In experimenting on monkeys Horsley found that hot irrigations (100° to 105° F.) were very beneficial in removing the shock of the operative procedure and in restoring the activity of the respiratory centre. He therefore has an assistant irrigate the head freely with bichloride of mercury—about 1 : 10,000—at the temperature mentioned during these operations. In this connection he expresses doubt whether the routine treatment of applying an ice bag in head injuries ought not to be given up.

Attention is directed to the class of cases in which a person receiving a blow on the occipito-temporal region falls unconscious and dies, or, as is said, falls dead. Death results in these cases, according to Horsley, from respiratory arrest, and they are eminently cases requiring artificial respiration, although this seems to have been entirely ignored heretofore.

In conclusion the author states that of all of the lower nerve centres which are necessary to the functions of so-called organic life, the respiratory centre is the most sensitive to mechanical pressure and shocks; that where death results in cases of intra-cranial pressure, artificial respirations should be immediately performed, and the skull opened freely at once; that in cases of sudden shock artificial respiration should be directly instituted, and that in every case heat should be applied to the head—preferably by irrigation—*Am. Jour. Med. Sciences.*

THE CAUSATION AND PATHOLOGY OF PELVIC INFLAMMATION.—L. S. McMurtry, *American Journal of Obstetrics*, says, The uterus is almost invariably involved in the process, its cavity being, as a rule, the point of departure and route of access of the inflammation. The inflammatory process, beginning in the uterine cavity, extends along contiguous mucous surfaces through the Fallopian tubes to the peritoneum, often destroying tissues and invading parenchymatous structures in its advanced course. The salpingitis, peritonitis, ovaritis, exudation, adhesions, pyosalpinx, hematosalpinx, hydrosalpinx, ovarian abscess, and lesions of the bowel are but resultant factors in the disease, corresponding to the intensity and stage of inflammation and structures involved.

The disease is one and the same, of which these are the varied expressions, and must be considered as a single disease having numerous stages and sequelæ and many causes.

Pelvic inflammation originates, practically without exception, from septic infection.

Septic infection may be specific or traumatic, including among traumatic causes the wounds of childbearing and abortion. Puerperal infection exceeds all other etiological factors in this disease. The open surface left by separation of the placenta is particularly liable to infection, as is also the intra-uterine surface after abortion. The enlarged lymphatics and hypertrophied blood-vessels, torn across and gaping, the process of degeneration following the complete term of pregnancy, almost pathological, offer a most receptive surface for absorbing, developing, and diffusing the slightest contamination by septic matter. An amount of septic matter will suffice to infect a woman under these conditions which would be resisted and overcome by the normal non-gravid uterus.

Moreover, the retention of portions of placenta partially detached and deprived of circulation renders infection even more easily accomplished.

A combination of puerperal infection and gonorrheal infection may coexist in the same individual, and give rise to what is termed mixed infection. This is by no means a rare occurrence.

A different class of traumatic infections is that of certain surgical operations and manipulations upon the uterus, such as arise from the use of sponge-tents, dilators, operations on the cervix and within the uterine cavity. The traumatism by which tissues rich in lymphatics are exposed to infection by foul discharges and dirty instruments is often the initial step in severe grades of pelvic

inflammation. It is not the traumatism *per se* which begets the inflammatory process; it is the admission of septic material. The inflammation is prevented by a healthy, clean mucous membrane and a proper aseptic condition of instruments.

Among other causes of pelvic inflammation may be mentioned tubercular salpingitis; the eruptive fevers, especially scarlatina and variola, and a sudden suppression of menstruation.

The irritation from other morbid conditions, such as that which arises from rupture of cystic growths, the pressure of solid tumors and obstruction of the tubes with retention and extension of secretions, with hypertrophy of epithelial and interstitial elements are factors in the production of a localised peritonitis. Imperfect development and malformation of the uterus and appendages may sustain a causal relation to pelvic inflammation. In studying the lesions of pelvic inflammation the tubes are of greatest importance, since they are the route of access and focus of the inflammatory process. The various classifications of the disease are but anatomical limitations of a single pathological process, determined by the character of infection, and nature's ability to resist its access by confining its area. At the outset there is congestion followed by effusion. The effusion is from the mucous membrane and into the underlying connective tissue. The rapidity and extent of this process depend upon the virulence of the attack and the condition of the parts. The tubes become filled with serum, which may drain into the uterus or discharge through the fimbriated ends into the peritoneum, or it may be retained by closure of these openings. The exudation into the tissues varies, making the tube-walls more or less thickened by infiltration with cells, in some instances penetrating the walls, and directly invading the peritoneum. The tube becomes adherent to the uterus and ovary, the broad ligament is matted down, and the fimbriæ covered over. Should nature's efforts avail to confine the effusion by sealing the fimbriated extremity of the tube, a hydrosalpinx will be formed. If the inflammation is accompanied with hæmorrhage, a hematosalpinx results. Resolution may take place more or less perfectly later on. If the process ends in suppuration there is a pyosalpinx If the contents leak through the fimbriated opening into the peritoneum, whether pus has formed or not, active peritonitis results. This is a conservative process, nature endeavoring to shut off the general peritoneal cavity by adhesion, and thus limit the inflamed area. Later on this exudate may be absorbed, or undergo organization and suppuration. When this process is virulent, tissues are infiltrated and destroyed by the intensity of the process, and break down by slight manipulation.

THE INFLUENCE OF THE LIVER IN THE DEVELOPMENT OF PANCREATIC DIABETES.—Although we have learned that certain lesions of the central nervous system and destructive changes in the pancreas respectively are attended with glycosuria, the etiology and pathology of diabetes mellitus are yet unexplained. Whatever be the chemic and metabolic changes upon which the excretion of sugar in the urine depends, there is evidence that no small part in the morbid process is played by the liver, of whose multiplicity of function we really know comparatively little. There is good reason for believing that under normal conditions the liver either stores up or converts into other bodies a substance allied to sugar, and which, under certain morbid conditions, appears in the urine as glucose. Additional evidence of the influence of the liver in the development of diabetes is furnished by the results of some experiments detailed at a recent meeting of the Berlin Physiological Society, by Marcuse, who undertook to determine if the diabetes that appears after extirpation of the pancreas manifests itself in case the liver is also removed. As the animals experimented with were likely to die sooner in consequence of the two operations than after the extirpation of the pancreas alone, the question arose as to whether or not the animals would live long enough to afford time for the development of the diabetes. To decide this point a series of observations were made upon nineteen frogs. It was found that in the twelve of these in which diabetes developed, this appeared within the first day or two, the animal living on an average for five days. The proportion of sugar contained in the urine, as determined by polarization, equalled 9.4 per cent. In a second series of almost parallel cases, both liver and pancreas were removed, with the result that in not one of the animals did the diabetes develop. These animals lived for from one to five days after the operation. The amount of urine excreted was considerable, though not so great as in the case of the animals from which the pancreas only had been removed. In explanation of the influence of the liver in the development of the diabetes that follows removal of the pancreas, it is suggested that there is formed in the liver a substance that, while not itself sugar, is yet of importance in the development of diabetes (perhaps a sugar-forming ferment), or that certain elements in the blood that are acted upon by the liver remain in the circulation after extirpation of this organ, and bring about decomposition of the sugar present after extirpation of the pancreas.—*Med. News.*

CARE OF THE MOUTH IN SICK PERSONS.—Rosenbach (*Zeit. fur Krankenpflege*) says that in many illnesses there is almost sure to be secondary trouble in the mouth, if preventive measures be not taken. A warning sign is dryness and red-

ness of the tongue and mucous membrane of the mouth, with difficulty in swallowing. Further signs are an evil odor from the mouth, coat d tongue and gums, bleeding of the gums, etc. Parasites are always present in the mouth, but it is only when the tissues are weakened that they undergo invasion by these parasites, which become then really pathogenic. Rosenbach concludes with the following rules: (1) Patients with good digestive powers, free from fever, and wit no loss of consciousness, require no more than the ordinary care of the mouth. (2) In children and very old persons, the less solid food taken the greater should be the care with the mouth. They should rinse the mouth out several times a day with lukewarm water, containing a little common salt, tincture of myrrh or eau de cologne added to stimulate secretion. When there is a tendency t bleeding of the gums, or when the teeth are bad, a pinch of powdered boric acid may be twice daily rubbed in between the lips and gums. Patients with false teeth should remove these when, owing to a loss of appetite or chronic gastric disturbance, they cannot take solid food. (3) In patients with partial loss of consciousness, the mouth should be examined several times a day for small sores, such as may arise from the pressure of the teeth and the lips, etc. Such sores should be powdered with a little boric acid or chlorate of potash, and the cracks at the corners of the lips heal quickly if dried with a clean towel and treated with boric acid or vaseline. The mucous membrane may be stimulated by wiping the tongue and mouth, and pressing on the tongue with a moist towel every two or three hours. If necessary, the hinder part of the tongue should be cleaned with a wad of cotton wool fastened to a stem. If the patient sleeps with the mouth open, the air in the room must be kept moist. A moistened layer of muslin laid on the mouth may be of some service. (4) Patients with fever should have something to drink—cold water or weak lemonade—at least every hour. One must not wait till the patient asks for a drink. Besides preventing dryness, the fluid maintains the activity of the glands, and the whole function of the mucous membrane. Many patients are prevented from drinking by a painful, dry and cracked condition of the lips, and, therefore, all feverish patients should, from the commencement of their illness, have their lips rubbed several times a day with vaseline or fat. In protracted cases of fever, the mouth may also be swabbed out with oil, fat, or greatly diluted glycerine.—*N. Y. Medical Times.*

THE TREATMENT OF MILIARY TUBERCULOSIS WITH GUAIACOL.—The *Journal des praticiens* for January 12th publishes an article on this subject in which the writer says that since the year 1893 simple painting with guaiacol has been employed in cases of febrile tuberculosis. Bard, Lépine, and others have demonstrated by a series of observations that its antipyretic action does not improve the condition of consumptives with cavities, that it may perhaps ameliorate sclerosis, but that it produces better results in limited miliary tuberculosis of a doubtful diagnosis. These lasting curative results differ from the transitory antipyretic action obtained in ordinary tuberculosis. The writer relates the histories of four cases in which this treatment was employed, and the following conclusions from a physiological point of view, he says, may be drawn: 1. The antipyretic effects of guaiacol are rapid and lasting in miliary tuberculosis. 2. The effects on nutrition are shown by the amelioration of the general condition and of the local lesions. 3. Sometimes cutaneous erythema, hypothermia, and a tendency to collapse may be observed, which are due to the impurities in the guaiacol, and not to the medicament itself. Its positive indication is true tuberculous fever with the formation of new granulations; its contraindication is hectic fever.

The method of administration consists in varying the dose from eight to thirty grains at each application. Boscq prescribes the following mixture in order to produce the greatest tolerance: Equal parts of chemically pure guaiacol and sweet-almond oil. The backs of the hands are painted with this mixture and immediately covered with cotton, which is kept in place with a bandage.

A Russian physician, Bartoszewicz, who experimented with this treatment on sixty-five patients in Dr. Laminowsky's service at Kharkow, employed compresses of guaiacol on the anterior part of the chest and over the back. A piece of linen was moistened with from twenty-five to thirty drops of prue guaiacol and applied on the skin, which was then covered with waxed paper kept in place with a bandage, and allowed to remain for from one to two hours.—*N. Y. Med. Jour.*

THE RELATION BETWEEN ACUTE RHEUMATISM AND ENDOCARDITIS AND MYOCARDITIS.—While it is generally conceded that acute rheumatism belongs in the category of infectious diseases, the proof of a specific mycotic etiology is yet wanting. It is true that several observers have described various organisms both in the synovial effusions and in the lesions of the complicating endocarditis; but the evidence is not sufficient, on the one hand, to ascribe to any one of these specific etiologic properties, or, on the other hand, to justify the conclusion that rheumatism, like pneumonia, may have a multiple etiology, although it is known that articular involvement occurs in connection with gonorrhea, typhoid fever, scarlatina and smallpox, as well as with rheumatism. The etiology of endocarditis is likewise somewhat obscured in doubt, though here the likelihood of

multiple etiology is greater than in the case of rheumatism, and is strongly supported by the bacteriologic evidence. While the relation between rheumatism and endocarditis and myocarditis is recognized clinically, the nature of the etiologic relation has not been clearly demonstrated. In an interesting address before the Society for Internal Medicine of Berlin *Deutsche med. Wochenschrift*, 1894, Leyden considered this subject, and reported a series of cases of acute rheumatism complicated by endocarditis, myocarditis and pericarditis, singly or together, in most of which he was able to isolate a delicate diplococcus, differing from any hitherto described, and unequivocally distinguishable from the various forms of staphylococcus, the streptococcus, and the diplococcus of pneumonia. The inference to be drawn is that this organism is the cause of acute rheumatism, and likewise of the secondary complications.—*Med. News.*

THE MEDICINAL TREATMENT OF RICKETS.—J. Comby, (*La Médecine Moderne*), calls attention, in an able article, to the medicinal treatment of rickets. The author referred to the method employed by various clinicians, especially to that of Kasswitz, of Vienna. It consists in the administration of phosphorus associated with cod-liver oil, according to the following formula:

R—Cod-liver oil, 1 litre (33.81 ounces):
Phosphorous, 10 centigrammes (1.5 grains).

Comby has tried this method, with more or less good results, in forty rachitic children, aged from ten months to three years. Children less than a a year old were given a dessertspoonful of the above prescription; those from twelve to fifteen months old, two dessertspoonfuls; and those above the latter age, three dessertspoonfuls. On an average, each little patient took daily 1 milligramme ($\frac{1}{60}$ grain of phosphorus and 8 to 10 grammes (2.2 to 2.7 fluidrachms) of cod-liver oil. As a general rule this treatment was well borne. However. one child had diarrhœa, which may have been caused by the oil as well as by the phosphorus; another child had patches of eczema; and still another little patient developed urticaria. But, on the whole, ill effects, the author says, are rarely caused by phosphorus if it be adminintered in small doses. Of the forty cases thus treated during several months, twenty-one were improved. in eighteen no positive results were obtained, and one case was made worse. To compare this method with the old treatment, consisting of salt baths, cod-liver oil, and phosphate of calcium, he employed the latter in a second series of forty cases. These children the author placed under salt baths and the internal administration of cod-liver oil. The percentage of amelioration, two complete cures and four failures. From these results, Comby believes that phosphorus is not a specific medicament in rickets. The judicious employment of phosphorus, in doses of $\frac{1}{2}$ to one milligramme ($\frac{1}{120}$ to $\frac{1}{60}$ grain) a day, in an oily vehicle, is harmless, and may be of some service. The remedy is an adjuvant, but not an infallible medicinal agent in rickets, as has been claimed. Aside from hygienic measures, the author believes that, on the whole, syrup of the iodide of iron, cod-liver oil, and perhaps some of the preparations of cinchona are the best remedial agents to be employed in the treatment of this disease.—*Therap. Gaz.*

THE TREATMENT OF CERTAIN AFFECTIONS OF THE STOMACH.—From a recent article of Dujardin-Beaumetz, (*Bull. Génér. de Thérapeutique*), we cull the following: Every individual suffering from disease of the stomach in whom there exists a true arrest of gastric function, or a tendency to such a condition, should, on going to bed, lie on the right side, in order to facilitate the passage of the food into the duodenum. Lying on the left side gives rise to the formation of a large amount of gas, accompanied by a regurgitation into the œsophagus of the products of digestion. Patients should make use of warm drinks. The usefulness of these is evident; in fact, warm water is one of the best means to excite muscular contractions in the stomach, but it is liable to cause vomiting. It is, therefore, preferable to administer infusions of chamomile, aniseed, or other similar aromatic substances, and as warm as they can be borne. In these cases the injection of mineral waters is likewise useful. Alkaline waters in small doses, half an hour to an hour after meals, increasd the secretion of gastric juice and its acidity; hence their advantage in cases of dyspepsia attended with a subnormal amount of hydrochloric acid in the gastric juice. Even in those cases where there is an excess of this acid, the alkaline waters do good, and in these instances through a different mechanism; they influence the mucous membrane of the stomach, so as to diminish its congestive and inflammatory condition, which is often the origin of the hyperacidity. The same may be said in regard to the use of bicarbonate of sodium, which should be administered during or after meals. A very good adjuvant in these cases of slow digestion is massage; this measure not only enhances muscular contraction of the walls of the stomach, but also increases the secretion of gastric juice, and manifestly modifies for the better chemical changes during digestion.—*Thera. Gaz.*

ON THE USE OF ANTIPYRIN IN LARGE DOSES.—The writer advocates the use of very large doses of antipyrin in certain neurotic cases. He says that personally he has hardly any experience of its deleterious effects—at least of a serious

nature—when employed with due precautions. He details the case of a boy, aged nine years, who had suffered for the previous two and a half years from severe fits of hystero-epileptic character, sometimes as many as 30 or 40 attacks occuring in a day. The treatment consisted of rest in bed, regulation of the bowels, and the exhibition of antipyrin in gradually-increasing doses, commencing with five grains, thrice daily. In three weeks he was taking twenty-five grains three times a day, with complete cessation of the attacks. The dose was then slightly lowered. The lad was dismised from the hospital in two months as quite well, and it was reported later that there had been no recurrence of the attacks. In another case a lad of thirteen years, suffering from choreic movements of the right side, received under gradually increasing doses as much as 50 grains thrice daily. He left the hospital in six weeks quite well. In another violent case improvement was very rapid under similar treatment. Dr. Anderson sums up his experience in the following aphorisms: 1. Antipyrin is not the dangerous drug that some observers have led us to suppose. 2. It may be given with safety in large doses, but the initial dose must be small, and it must be slowly and cautiously increassed under careful supervision. 3. In large doses it often yields surprisingly good results, and in chorea it is the only medicine from which cures may confidently be expected.—*Brit. Med. Jour.*

A NEW METHOD OF CHLOROFORM NARCOSIS — Cardiac syncope in chloroform narcosis, so far as it could be attributed to the chloroform, was, except from an overdose and carelessness, a reflex phenomenon. It, as well as the stoppage of the respiration that accompanied it, was due to irritation of the peripheral nerves of the nasal mucous membrane. All inhalations of anæsthetics produced these reflex symptoms. By proper cocainizings of the nasal mucous membranes the whole of the reflexes proceeding from it could be avoided. The greater part of the dangers of inhalation of anæsthetics were avoided in this way, especially those produced by chloroform. Cocaine possessed a certain antidotal or antitoxic action as regarded chloroform. Chloroform, as the least dangerous anæsthetic, was to be preferred to ether. The chloroform should be given from the commencement, and through the whole narcosis by drops, and the administration should always be preceded by the cocaine spray.—*Berlin Cor. Med. Press and Circular*

CHEMICAL research proves that Kola contains a large percentage of Caffeine (the active principle of tea and coffee), also Theobromine, the stimulating principle of Cacao. But not to these alone is its remarkable virtue to be credited, as further investigation proves that the fresh (undried) Kola nut contains a peculiar active principle (glucoside) found in no other drug, to which the name of Kolanin has been given. It is now definitely determined that to this peculiar principle, which is found abundantly in the fresh nut, is mainly due the marvelous action on the human organism, as in the drying of such Kola nuts as are generally imported to this country this most valuable principle is partially, if not wholly, decomposed into caffeine.

F. Stearns & Co., of Detroit, Mich., were the first manufacturing pharmacists to take advantage of the knowledge of this fact, and they have prepared a delicious Wine of Kola,, to which they have given the fanciful title of "Kolavin" to distinguish their product from similar preparations which may in time appear. Kolavin is made from fresh (undried) Kola nuts, each tablespoonful dose representing thirty grains of the fresh nuts. It is palatable and delicious, and highly recommended in the treatment of nervous exhaustion, atonic dyspepsia, melancholia, various diseases of the heart, asthma, sick headache, sea sickness, chronic alcoholism, etc.

Physicians who desire to test this new product can obtain samples of "Kolavin" and literature on Kola by making application to F. Stearns & Co.

DR. CHAUNCY STEWART, of Allegheny City, Pa., has used Iodia very extensively in his practice and regards it as the "ideal alterative—the *sine qua non* in the treatment of syphilis, scrofula, and all diseases arising from syphilitic contamination or a strumous diathesis. IODIA has this advantage over mercurial treatment in syphilis; when the patient does get well, HE IS WELL. He is not tortured with mercurial rheumatism nor made to blush through the syphilitic blossoming of his face in after years. HE IS WELL. Unlike the long-continued use of other alteratives, IODIA does not reduce and debilitate the constitution, but invigorates and restores the vital powers and enables the patient at all times to contine in the discharge of his vocation.

Every periodical now and then gets one of its copies back with "refused" marked on the cover. We think Bill Nye was about right when he said: "A man may ride on the back coach of a railway train to save interest on his money till the conductor gets around, or stop his watch at night to save wear and tear, or leave his 'i' or 't' without a dot or cross to save ink, or pasture his mother's grave to save corn, but a man of this sort is a gentleman compared to the fellow that will take a paper two or three years, and when asked to pay for it puts it back in the office and has it marked "refused.'" The above is to whom it may concern. or be likely to concern at any time.—*Htlanta Med. Jonr.*

THE CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News.

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AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MAHLER, 23 Rue Richer, Paris.

TORONTO, MARCH 1895.

Editorial.

FATTY HEART.

Few cardiac diseases present so many difficulties to the practitioner, either as to exact diagnosis or treatment as does the condition, rather loosely spoken of as fatty heart.

It is necessary to remember that two, and perhaps three, quite distinct pathological conditions must be noted in making a diagnosis in suspected fatty heart. We all know that in long-continued, wasting diseases, accompanied by a high range of temperature, there is a condition akin to, but not identical with the fatty degeneration. The heart muscle shows, on examination, a paleness, and a soft, brittle texture, but histologically presents quite a different aspect from the degeneration induced by phosphorus poisoning, pernicious anæmia, or the myocarditis of diphtheria. This is the heart which so often causes fatal syncope, when a patient recovering from typhoid, rises too quickly in bed, or takes other violent exercise. We may suppose then, that, in such cases, the heart muscle is weakened, flabby and ill-nourished, in common with all the other muscles of the body; and thus succumbs to the unusual strain put upon it.

Then we have the true fatty degeneration, which follows phosphorus poisoning, as it does also the toxic effects of arsenic, mercury and lead; pernicious anæmia, Hodgkin's disease, and sometimes cancer and phthisis.

The third form, usually spoken of as fatty overgrowth, is the *Cor adiposum* of the older writers. It is usually associated with a general tendency to obesity, and may consist in an abnormal deposit of fat under the pericardium, or an infiltration between the muscular fasiculi. This form is induced by an indolent and luxurious mode of life, with overfeeding and drinking, especially beer drinking.

Now, in any suspected case, the form of fatty heart may be generally fairly well made out by carefully scanning the causes which have induced the degeneration; and treatment instituted accordingly.

We said "suspected case," for it is the clinical experience of all who have studied the heart, that *there are no certain signs of the condition.*

It is notable that by physical examination, a fatty deposit in and about the heart, cannot be distinguished from true fatty degeneration. The symptoms usually put down are very obscure and doubtful, and this conclusion of some of the most distinguished clinicians of the day, must be the consolation of many a befogged general practitioner, when listening to a "suspected" fatty heart. There *was* one landmark which gave confidence in diagnosis, but even that has now been taken from us; "the *arcus senilis* is of no moment in the diagnosis of fatty heart," (Osler).

So we have to consider the condition of the patient; dyspnœa on exertion; great muscular and mental debility; irritability from imperfect nourishment of the brain; coldness of the extremities; slow, feeble, irregular or intermittent pulse; disturbed sleep; cardiac asthma and anginal attacks.

The treatment will of course vary with the particular form under consideration. The heart of convalescents must be saved from undue exertion by the most scrupulous conservation of its energies. Rest in bed, and concentrated nourishment with tonics are the chief indications. Stimulants are useful in many cases to give the necessary fillip to the stomach, both for appetite and digestion.

In true fatty degeneration the above remarks will apply, plus diffusible stimulants to overcome the sense of faintness, together with strychnia and coca.

Opium in any form should be avoided for restlessness and insomnia, and the bromides, prefer-

ably with hop and hyoscyamus, used. If these fail, codeia may be tried, and this failing, morphia with the aromatic spirits of ammonia and chloroform water may be resorted to.

In fatty deposit the treatment will vary with the stage at which the patient comes under observation. If late, and cardiac dilatation and failure show themselves, the same treatment as has just been described will be needed.

If earlier, stop alcoholic beverages, limit the diet, allow no drinking at meals, avoid hydrocarbons and carbohydrates, and insist on moderate, regular exercise on the level.

Oertel's cure for this form of heart disease is practically obsolete.

"BICYCLE HEART."

The advent of the bicycle, with its thousands of admirers has, as is frequeutly the case with innovations, brought with it certain evils, the result of undue indulgence in its use.

A great deal of discussion has been going on recently, especially in the British Press, regarding what has been called "Bicycle Heart," a condition analogous to the "irritable heart" of DaCosta, due to undue acceleration of the heart's action, the result of the senseless desire of nearly every young man who owns a wheel to be considered a "Zimmerman" or other crack rider.

The sight of a young man humped almost double over his handle bar speeding away as if life depended upon it, is a familiar one to all, and this threatens to cause a deterioration of the race according to Sir S. W. Richardson, who has been delivering a series of lectures on the evil results of excessive bicycling in England.

The trouble is caused by the over-stimulation of the intrinsic cardiac ganglia, which is followed by exhaustion causing a permanent irritability of the heart-muscle, giving rise to many well recognized symptoms.

A case in the practice of Kay Tomory, of Caithness, Scotland, will illustrate the subject:

On June 2nd, 1894, he was consulted by a young man, æt. 23, complaining of palpitation.

On examination of the chest there was found to be a reduplication of the second sound in the pulmonary area, otherwise the heart sounds were normal, and there was no enlargement of the heart area to be made out on percussion. The pulse was full, regular, and beating at the rate of 76 per minute.

He gave the following history: In the spring of 1892 he began practising *racing* on his bicycle, to train for some athletic sports. Soon afterwards he felt the palpitation complained of, with pain, principally after he retired to bed.

He consulted several medical men, and got a good deal of relief by day, but the pain at night continued. Dr. Kay Tomory diagnosed "Bicycle heart" due to over-exertion in bicycling.

He was advised to abstain from using his wheel, and live in the open air as much as possible, and given bromide of ammonia and arsenic. On the 15th of June he returned, reporting slight improvement. His pulse was 84, regular and full, but the second sound in the mitral area was loud and conducted to the inter-axillary space.

The treatment was changed by the addition of belladonna and digitalis to the ammonia bromide.

On the 18th day of December he returned, reporting himself cured, and, upon examination, the heart sounds were quiet and normal.

Dr. Tomary, in using bromides, acted on the assumption that, owing to the strain on the cardiac muscle, the inhibitory ganglia had been involved, and what was required was rest, as far as bicycling was concerned, and a nerve sedative when the pain and precordial distress was worst.

The above case, presenting symptoms now being recognized by all medical men as due to excessive bicycling, teaches us that, while this form of exercise is very beneficial when not overdone, racing, on the other hand, is apt to produce cardiac fatigue, leading to grave danger unless recognized in time.

LETTER FROM HEIDELBERG.

Dr. Olmstead, in an interesting letter to a friend says:

Prof. Hoffman showed us two nervous cases this evening which to me, were very interesting. One was Monesen's disease—perhaps you have seen a case though it is rare, I believe, in England

and America and quite rare here too. The first patient was a powerfully built young man, with tremendous muscles. At first one would think that there was nothing wrong with him; but when he grasped your hand and gave it a good squeeze, he could not relax his grasp for abont 8 seconds, when it would gradually loosen. When he would try to work his fingers they would move very slowly and stiffly at first, but later he could move them as well as anyone. If he was told to get up off his chair and trot across the room, he would carry out the command with the greatest difficulty, just as if all his joints were rusty and needed oiling, but after he got limbered up a bit, he could go as well and as fast as anyone.

The response of muscles to mechanical stimulation was also very interesting. When, for instance, the deitoid was struck with the percussion hammer, the fibres struck would promptly contract, causing a furrow in the muscle, and remain contracted for some 7 or 8 seconds. If the muscles in the ball of the thumb were struck, the thumb would stiffen out, and about 8 seconds would elapse before relaxation would set in. This tonic contraction with the "after duration," (*Nachdauer*) of the contraction was present in nearly all of the muscles of the body, but was more prominent after sudden exertion. Thus, if he closed his mouth and brought his teeth together as tightly as he could, some time would elapse before he could open his mouth again. On his projecting his tongue, placing the fingers behind it, and then striking one side of it with a percussion hammer, the local fibres would contract into a little knot and remain so for several seconds. Mentally he was all right.

The electrical reactions were normal. When applied to the nerves, to both Galvanic and Faradic currents; to the Faradic, strong and well-marked tonic contraction of long continued duration would take place in the muscles supplied by that nerve With a continuous stimulus undulation of stimulated muscles would occur. By placing the cathode on the breast and the anode on the leg, the galvanic current (about 20 milliamperes), awave-like motion could be seen presently coming from the cathode to the anode. This was most interesting to see, and was first described by Erb. in fact, Erb did all of the most important investigations in this disease.

Cause—Heredity, being transmitted through the male branch of family.

The muscles show hypertrophy of fibres, increased number of muscle nuclei, some of the nuclei occurring in the centre of the fibre, and increased amount of connective tissue. Some muscle fibres have clefts and spaces in them. The connective tissue is increased. It is evidently a disease of the muscles, and not of the nerves.

Dr. Pavy on Diabetes.—When invited to deliver last year, the Croonian Lectures before the Royal College of Physicians, Dr. Pavy took for his title, "A New Departure in Diabetes."—*Med. Rec.* The author's views have long been known as strongly opposed to those of Claude Bernard, and having devoted thirty years to a study of the physiology of the carbohydrates, his theories are at least entitled to a respectful hearing. In these lectures he summed up the results of his studies, and made a final statement of the views which his researches have led him to adopt.

The liver, he said, is not the source of sugar, but on the contrary, abstracts it from the portal blood, and so checks its entrance into the general circulation. If the liver fails in this duty diabetes ensues He admitted that glycogen is a store of carbohydrate in the liver, but this, he said, is not reconverted into sugar. When removed quite fresh from the body the liver contains no more sugar than other tissues. Venous blood contains as much sugar as arterial blood, and portal blood during feeding is always richest in sugar. What, then, becomes of the hepatic glycogen? It goes to form proteids, or fat, or both. From a series of important experiments it would appear, the lecturer held, that fat is formed from starch not only by the liver, but also by the masses of protoplasm covering the intestinal villi. Thus, there are "two lines of defence" against the entrance of free carbohydrates into the general circulation —the protoplasm of the liver and that of the villi. These transform soluble carbohydrates into fat and glycogen. If from any cause these "lines of defence" are weakened, diabetes results in a degree proportionate to the impairment of function. It is thus we see clinically cases of slight glycosuria amenable to treatment by reducing the carbohydrates of the diet. But in severe cases

the "lines of defence" are entirely broken down. Dr. Pavy explained the occurrence of these severe cases and our inability to help them by diet, by saying that a certain amount of carbohydrate is formed in the process of digestion, even from albuminous food, and in these cases even this cannot be synthetized into proteids.

Why does protoplasm lose its synthetizing power? Dr. Pavy did not think the fault is in the protoplasm, but that the latter is influenced by the vessels, and these, of course, by the nervous system. A hyperoxygenated state of the blood favors the transformation of carbohydrate into glucose and may produce glycosuria. Then dilatation of the arterioles allows a rush of blood through the capillaries, so that the venous blood is not sufficiently dearterialized. This favors the passage of carbohydrates into glucose. The vascular dilatation must depend on derangement of the vasomotor nervous system, and the whole history of diabetes proves that the disease is often due to nervous disorder. In some most intractable cases Dr. Pavy believed the sugar must have come from the tissues, and in explanation of this he conjectured the existence of a ferment acting on their proteid matter which has a glucoside constitution.

SIMCOE DISTRICT MEDICAL SOCIETY.—The twelfth regular meeting of this society was held in the Council Chamber, Orillia, on Wednesday, the 13th inst., the President, Dr. Howland, of Huntsville, in the chair. The following members were present and took part in the discussions: Drs. Howland and Ross, of Huntsville; Dr. Hanly, of Waubaushene; Drs. Ross, Smith and Arnall, of Barrie; Drs. Alex. Harvie, Jas. N. Harvie, A. E. Ardagh, Ainslie Ardagh, McLean, Herriman and Shaw, of Orillia, and Dr. Raikes, of Midland.

Dr. Hanly addressed the meeting, thanking the members of the Association for their assistance in electing him to represent them in the Ontario Medical Council, and outlining the course he intended to pursue as their representative.

Dr. Ross, of Huntsville, read a carefully prepared paper on appendicitis, with a history of his own case. After an animated discussion, taken part in by nearly all the members present, Dr. Ross replied.

Dr. Powell, of Toronto, formerly of Edgar, who was present as the guest of the society, gave a lengthy and interesting address on the surgical treatment of injuries and disease of the abdominal viscera, explaining the various mechanical appliances which have been recently introduced and which have so greatly lessened the difficulties of abdominal surgery.

Dr. W. A. Ross, of Barrie, read a paper on cancer, going very fully into the question of operative treatment, and illustrating his conclusions by histories of instructive cases.

After some discussion on a motion of the Secretary's to change one of the by-laws, which was carried, the meeting adjourned to partake of a most enjoyable supper provided by the Orillia members of the Association.

R. RAIKES, M.D.,
Secretary.

SPRAY FOR THE NOSE AND THROAT.—In Part Second of Saunders' Question Compends," No. 14, second edition, just issued, Dr. E. B. Gleason recommends for the purpose of spraying the nose and throat the following formula:—Antipyrin, grs. xvj; aquæ, fl. ℥ j.

He says: A solution of antipyrin of the above strength, when sprayed upon the mucous membrane of the nose, pharynx or larynx, has the power of contracting the capillaries and producing an artificial anæmia, which effect is maintained for from three to five hours. The above solution may be used with the atomizer in all inflammations of the mucous membrane of the upper respiratory tract. When used after the application of cocaine to the nose, it will maintain the contractile effect of that drug upon the erectile tissue for several hours; when sprayed upon the nasal mucous membrane without the previous application of cocaine, it gives rise to a smarting sensation, which, however, quickly subsides. Applied as a spray within the larynx by means of an atomizer, it contracts the blood-vessels of the laryngeal mucous membrane and diminishes secretion, cough and expectoration. It is extremely valuable as a remedy for the night cough of laryngitis phthisica, often securing a night's rest for such patients, who may be provided with an ordinary hand-atomizer filled with a solution of antipyrin and instructed to inhale its spray as often as is required to control the cough.

TREATMENT OF VAGINITIS.—Lutand, *Annals of Gynæcology and Pediatry*, abstracts an article, *Revue Obstétricale Gynécologique*, in which the author urges a careful distinction to be made between the acute and chronic stages of the affection, although very little difference exists in the treatment of the simpler and specific forms of the disease.

In the acute stage the speculum should be avoided, the patient kept as quiet as possible, and walking, coitus, and all physical exercise forbidden. Esmarch's douche with two litres of a 1-per-cent. solution of boric acid should be injected about every six hours. Emollient injections, such as starch, flax-seed, or decoction of poppy-heads, are also useful.

In cases of severe pain a suppository of opium may be given at bedtime. Bladder symptoms are relieved by poultices sprinkled with laudanum; bromides, emollient drinks, and alkaline diuretics are prescribed.

Wine is not to be used, but weak tea may be drunk.

For the chronic stage the following injections are recommended to be used three times daily:

℞—Acidi carbolici, ... gms. v.
Alcoholis, ... gms. x.
Ess. thym., ... gtt. xx.—M.
Sig.—For two quarts of water.

℞—Hydrarg. bichloridi, . . ctgms. xvv.
Acidi tartarici, ... gm. j.—M.
Sig.—For two litres of water.

℞—Potass. permangan., . . gms. x.
Aquæ dest., ... gms. cc.—M.
Sig.—A tablespoonful for two quarts of water.

This last injection is the best remedy for gonorrhœal vaginitis, but it soils linen.

In rebellious cases or when it is necessary to act rapidly, a speculum is introduced and the vagina is painted with a solution of silver nitrate (two grammes in thirty grammes of water).

Before withdrawing the speculum, a large tampon saturated with the following is introduced:

℞—Acidi tannici, ... gms. ij.
Cocain. hydrochlor., . . ctgms. x.
Glycerini, ... gms. cxx.—M.

This tampon should be left in position two days.

Separation of the walls of the vagina by the introduction of tampons of iodoform or salol gauze hastens the cure of every case.

TORSION FOR RECTAL INCONTINENCE.—A recent paper of Dr. Gerster on this subject, *Boston Med. and Surg. Jour.*, is interesting, as furnishing additional information respecting the method reported by Gersuny, of Vienna, for the treatment of rectal incontinence described in detail in a previous report. The incontinence may be due to congenital absence of the sphincter ani, to paralysis of sphincter from spinal lesions, or surgical injuries due to traumatism or operation. Gerster has used torsion with success to relieve incontinence. He rotates the free end of the gut around its own axis so as to arrange the folds of mucous membrane in spirals. The twisted gut is then sutured to the edges of the external wound. The amount of torsion is gauged by the amount of resistance felt by the index finger on introduction. He did not in two cases make more than one complete twist, but more than one revolution might be required when the freed end of the rectum was long, that is, when five to six inches had been excised and the end drawn down. If not twisted at once, the operation of torsion must be delayed till the rectum is fixed in a mass of granulations to the surrounding soft parts. It is then dissected clear for two or three inches, and twisted till the necessary resistance is obtained. Which method is preferable is not yet known. Gerster has never performed torsion immediately after extirpation, only after dissecting out the rectum, the proximal end when the dissection ended being fixed firmly when torsion was made.

THE TREATMENT OF THE URIC ACID DIATHESIS.—Dr. John F. Barbour. *Am. Therap.*, points out the chemistry and physiology of this condition, quoting from well-known writers upon the subject. The relations of this condition to gout, articular rheumatism, migraine, and cutaneous affections on the one hand, and tocertain nervous diseases on the other, as neurasthenia, hysteria, epilepsy, hereditary forms of insanity, general paresis, locomotor ataxia, and the pathology as shown in the kidneys, blood-vessels, and the nervous system, are carefully presented. In the acute attack, piperazine seems to give the speediest results, and of the use of this

remedy three cases are reported. Fifteen grains of the drug, dissolved in one ounce of water, are to be used each day. This is to be further diluted by the addition of a small quantity of this solution to each tumbler of drinking water, and the free use of water both externally and internally is recommended. It is believed that this method eliminates the excess of uric acid and aborts the further diathesis. The treatment of the diathesis is entirely hygienic and dietetic; the patients should keep a perpetual lent. "They are like a smoky flue; everything must be done to increase the draught." The diet should be non-nitrogenous, and the patient should take abundant exercise in the open air.

WHAT WE MAY SEE IN THE SPUTUM.—*Kansas Med. Jour.*—Microscopical examinations have so superseded the older methods that we frequently overlook many valuable points of diagnosis that might be observed with the unaided eye. We may first observe the quantity, reaction and consistence. Patients with bronchitis or cavities, and especially cases of bronchiectasis, have the largest quantity. Unless contaminated with vomited matter, sputum is always alkaline. Mucus sputum usually occurs early in acute bronchitis. Muco-purulent sputum in chronic bronchitis and in phthisis, or in the later stages of acute bronchitis and pneumonia. Purulent sputum (nearly pure pus) indicates a cavity or an empyema. Serous sputum is fluid, and contains albumen and is frothy. It is characteristic of œdema of lungs. Blood expectorated from the lungs is usually bright red, frothy and alkaline. From the stomach it is dark, nearly brown, and acid in reaction. Coal soot makes a black or gray sputum. Fibres and pieces of lung tissue indicate a cavity. Fibrinous casts indicate fibrinous inflammations. These are frequently found in croupous bronchitis.

THE TREATMENT OF OBSTRUCTION OF THE BOWEL BY ELECTRICITY.—Althaus, *Br. Med. Jour.*, has reported the case of a man, fifty-four years old, who for three months had suffered with obstinate constipation. At the time of coming under observation the bowels had not been moved for ten days, and the abdomen was distended and tender. The appetite was lost, and a condition of collapse existed, with sunken face, and a small, feeble pulse. The introduction of a long tube proved unavailing, and electric treatment was resorted to. An insulated sound, with a free metallic end, was introduced into the rectum, and a moistened conductor applied to the abdominal parietes, chiefly in the region of the sigmoid flexure. Through this circuit a primary faradic current was passed, and its force gradually increased until the patient experienced a decided feeling of vibration in the bowel. In the course of the day a copious intestinal evacuation ensued, with wonderful relief to all of the symptoms. During the next two days the bowels acted ten times, and in the course of a week the patient appeared to be quite well. A second case, in a woman fifty-seven years old, is cited in which a like result was obtained from similar treatment.

COPPER ARSENITE IN THERAPY.—A number of cases are described by Dr. A. Hedlicka, *New York Med. Jour.*, in which he employed copper arsenite locally, with universal success in the various acute and sub-acute inflammations of the mucous membranes, attended with pain, suffusion, and more or less watery discharge. He found it most efficient in solutions of 1.50,000-100,000. These solutions are easily made by dissolving a 1-100 grain pellet in 1½ ounces of water; they are applied at intervals rarely longer than an hour (bladder, urethra, and nose), and frequently not longer than from 10 to 15 minutes. The remedy is rather indifferent in cases where the discharge is thick or persistent, unless the affected surface be previously thoroughly cleansed. The duration of the treatment ranged from a few hours to two or three days in mild cases, from several days to three months in severe cases. The author pretends to have never failed; relief being nearly always instantaneous, no other remedies were needed.

APPENDICULAR COLIC.—*Brit. Med. Jour.* 1. The vermiform appendix is liable to partial occlusion of its canal from various causes, some of which are permanent, while others are transient. 2. The symptoms by which such incomplete obstruction is to be recognized are those of "appendicular colic." 3. In cases of recurring appendicular colic, and especially if there be at the same time an increasing severity, our practice should be to recommend the removal of the appendix. 4

The time has arrived when such misleading names as typhlitis, perityphlitis, cecal and pericecal abscess should no longer be applied to diseases having their origin in the vermiform appendix, seeing that appendicular colic, appendicitis, and appendicular abscess more correctly and quite as euphoniously and concisely describe the conditions in each case referred to.

THE FLAP METHOD OF OPERATING.—Chiene, *Brit. Med. Jour.*, advocates the more general use of the flap method of operating. It consists in exposing a part by means of a flap instead of making a direct incision down to it. The advantages claimed are that as the wound in the deeper parts is at a distance from the skin wound, the skin over the deeper wound is not interfered with; it supports the deeper tissues which have been divided, and rapid healing takes place. The flap is composed of skin and subcutaneous tissue. It should, as a rule, be crescentic, and not horseshoe shaped. The incision should be made as far as possible from the sources of septic infection. The main blood-supply should enter the base of the flap; this, however, is secondary. He recommends its use in the removal of loose cartilages from joints, in operations for hernia, in excision of the knee, in removal of tuberculous glands, operations on the tendons, and in many other cases.

A CLINICAL STUDY OF THE EFFECTS OF INHALATIONS OF CHLOROFORM AND ETHER UPON THE KIDNEY.—Wunderlich, *Cent. f. Chir.*, has examined the urine of 100 cases of ether and chloroform narcosis. The urine was carefully examined before and after, both microscopically and chemically. The investigations gave the following results:—

1. In those cases in which albumin is already present, the amount of albumin is markedly increased—that is, when ether is the anæsthetic used.

2. Albumin is frequently seen after inhalations of chloroform and seldom when ether is used. The albuminuria usually disappears in from twenty four to forty-eight hours.

3. When chloroform is used casts are frequently found in the urine, but seldom after ether. The cause of the albumin and casts is, in the author's estimation, an ischemia of the kidney or an increase in the blood-pressure.

The author in conclusion says the so-called "ether nephritis" may be excluded from medical literature.

BICARBONATE OF SODA IN ARTHRITISM.—Dr. A. Cavazanni, *La Semaine Médicale*, has found the bicarbonate of soda to be the best remedy in the treatment of the articular and muscular pains, either with or without swelling, of arthritic patients. It must be given for a long time, in doses of one to four grams a day. With this simple and efficacious measure he has succeeded in relieving eight cases where other remedies had failed. He would not advise its administration in powder, but rather a weak solution while the stomach is empty.

SUGAR AS AN OXYTECIC.—Dr. Bossi, of Gallly, finds that sugar possesses the power of stimulating the uterine contractions. About an ounce is given dissolved in water, and its effect on the pains during labor is usually manifest in from 25 to 40 minutes. Rarely a second dose is required. The contractions induced are of the usual normal character

NOT AFRAID OF ANTIKAMNIA.—"I would not hesitate to take fifteen grains of Antikamnia at a dose, and even repeat it every half-hour, if required. I am subject to severe attacks of neuralgic headaches, and I take big doses with no untoward effects."—Dr. C. Alex. Garnsey, Batavia, Ills.

WM. R. WARNER & Co., Philadelphia, will mail their Therapeutic Reference Book, a very handy little volume, to any of our subscribers who will send fifteen cents to cover cost of mailing.

FREDERICK STEARNS & Co. have established a $600 fellowship of two years, at the Ann Arbor University. It is to be called the Stearn's Fellowship of Pharmaceutical Chemistry and Pharmacology.

Dr. Dana declares that five drops every three hours of arbor vitæ relieves the most severe case of cystitis.

THE ONTARIO MEDICAL ASSOCIATION will meet in Toronto, June 5th and 6th, under the Presidency of R. W. Bruce Smith, of Hamilton.

DR. HERMAN MYNTER, of Buffalo, reports a case of sarcoma of the abdominal cavity cured by the toxins of erysipelas.

THE PHYSICIAN'S POCKET DAY BOOK AND VISITING LIST.—The Medical Novelty Company, 21 West 23rd Street, New York, will be very glad to supply this work free throughout the year to any of our subscribers who will send them their names.

Books and Pamphlets.

THE PRINCIPLES OF SURGERY AND SURGICAL PATHOLOGY. By Dr. Hermann Tillmanns, Professor of the University of Leipzig. Translated from the third German edition, by John Rogers, M.D., and Benjamin Linton, M.D., New York. Edited by Lewis A Stimson, M.D., Professor of Surgery in the University of the City of New York. New York: D. Appleton & Co. Toronto: Carveth & Co. 1894.

A proposition that in Surgical Pathology more real progress has been made in the last fifteen years than during the previous fifteen centuries is one that can be easily and successfully maintained. In no other department of medicine has there been anything like such rapid advancement.

The natural result of this is that the standard authorities of but a few years ago are out-dated, and must be replaced. Pajet's and Billroth's works no longer represent the accepted teachings of department. The trouble has been that for some years there have been no other works available, in English, to replace them. The need of something new, presenting within the limits of a single volume the present *status* of Surgical Pathology has been acutely felt, and to meet this demand Tillmann's Principles, a work which at once upon its publication in January, took a leading position, is now presented.

It is just the book for surgeons who entered practice before Surgical Bacteriology had been developed so as to afford, as it now does, a firm foundation for the best clinical work. By its aid one's knowledge of the results of most recent investigations can be, so to speak, brought up to date. No surgeon however experienced can read it without having his *technique* consciously or unconsciously improved, and his grasp upon the fixed facts of surgical science made more secure.

In illustrations, type, paper, and binding, Tillmann's Surgical Pathology is up to the Appleton Standard, and that standard, as we all know, is unsurpassed.

LABORATORY GUIDE FOR THE BACTERIOLOGIST. By Langdon Frothingham, M.D.V., Assistant in Bacteriology & Veterinary Science, Sheffield Scientific School, Yale University. Illustrated. Philadelphia: W. B. Saunders, 925 Walnut Street. 1895. 8vo. pp. 93., 75 cts.

The object of this manual is that of supplying, in concise and convenient form, the ordinary methods of babteriological technique, which are otherwise only to be found in the larger text-books, or in serial literature.

The introductory chapter, which supplies details for the arrangement and working of a small laboratory, is really the most valuable part of the book, and will, doubtless, be appreciated by those who have not had the opportunity of acquiring practical knowledge of this kind. This is followed by formulas for stains, together with their method of application, the order of the various manipulations being indicated by numbered paragraphs, so that failure is reduced to a minimum. The methods comprise all that are likely to be required by the physician, in the demonstration of pathogenic germs, and also include the staining of spores, and the cutting and staining of infected tissues. The formulas have been selected with care, and are fairly representative, but we cannot help noticing a probable typographical error in regard to Loeffler's methylene blue, in which the strength of the potash solution is stated to be ten times that recommended by the originator.

The chapter on the preparation of culture media embraces the ordinary kinds, including the quick method for serum, but not giving the special differentiating media, as those of Parietti, Uffelmann, and others. The matter is, however, so arranged that alternate blank pages are provided for the introduction of written additions or remarks. The illustrations, which are very good, represent several typical micro-organisms.

THE CANADA LANCET,

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MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

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ARTIFICIAL FEEDING AND CARE OF INFANTS.

BY DR. JOHN W. S. M'CULLOUGH, ALLISTON, ONT.

The subject of artificial feeding of infants is a most important one, and is becoming more so every day we live, because the number of children requiring it is rapidly increasing.

While it is an unfortunate thing for a child at the very best of times to be deprived of nature's form of food, it is no less a fact that circumstances often necessitate partial or complete feeding by hand.

Our profession has not, I think, given this subject the practical attention it merits. Too much latitude has been allowed the commercial greed of the makers of the various patent foods with which the market is stocked. The matter of infant's food and all the little details pertaining thereto, are usually left to the discretion of the nurse, who may be the most incompetent party in the world to judge in such matters, or else to the mother, who often young and inexperienced, feeds her child on pure cow's milk or the same diluted with simple water or lime-water. Not satisfied with this, for her baby usually does not thrive well upon it, she may add a daily allowance of boiled bread and milk or boiled biscuit. As a result the child vomits or has diarrhœa. All the mothers of families in the neighborhood, with the most tender solicitude for the baby, assure the young mother that "vomiting in a baby is a healthy sign." The mother is soon frightened into consulting her doctor. He, often without a great deal of thought in the matter, though he may tell her that such vomiting means too much, or an improper quality of food; may prescribe Nestle's Food, which is as good as any of its class. It by no means nor often does well. It may suffice for a small child, but is never sufficient for a large one. If this evidence of simple indigestion were the worst result 'twere well, but the large infant mortality is directly traceable to improper feeding, and, worse than all, so frequently, is the miserable dyspeptic after-life.

These few reasons should amply suffice to lead us to inquire with the greatest care as to what should be the food of the infant, who must of necessity be fed on some substitute for the mother's milk. We should in such a case be at once able to recommend the best, and to give proper instructions regarding its preparation, proper quantity, times of feeding, etc.

The *best food* is that one which first of all is satisfactory as regards *quality*. Then to meet with favor it must be *simple of preparation, easily and cheaply procurable*. A complicated plan may do for some people, but with the majority it will suffer from neglect.

The patent foods, as I have already intimated, are not likely to be satisfactory as regards quality. They do not suit the varying ages of the child. They are expensive and not always to be depended upon.

The best food, and that which will continue to be most used, is one having for its basis cow's milk. Asses' and goats' milk approach the mother's more nearly in chemical composition, but they are not usually accessible. We must approximate the cow's milk by proper preparation to as near that of the mothers' as possible.

A comparison of the two shows that—

Cow's milk.			Mother's milk.	
Acid.		Reaction.	Alkaline.	
13.2	per cent.	Solids	12-13	per cent.
4	"	Fats	3-4	"
4	"	Albuminoids	1-2	"
4 5	"	Sugar	7.	"
.7	"	Extractives.	0· 1-2	"

So we see the chief differences between the two are in that cow's milk is acid in reaction, contains a little more fat, considerably more albuminoids, and considerably less sugar.

The most important practical difference consists in the manner in which cow's milk coagulates in the stomach. It forms a tough curd unlike the flaky curd of mother's milk. This is indigestible and consequently ferments. It causes the painful flatulence, the vomiting and other well-known

troubles. Our success in treating cow's milk and feeding a child thereon will depend almost entirely on the manner in which we deal with the casein to prevent this tough curd from being formed.

Two methods are advised (Money):

(1) By mechanically preventing the particles of casein from running together.

(2) By chemically preventing coagulation by the use of lime-water or other alkalies. This latter plan is entirely wrong, because to accomplish its purpose would require a quantity equal to $\frac{1}{3}$ of the meal. In the former method various kinds of mucillaginous fluids are recommended, such as acacia, gelatine, isinglass or tragacanth.

The plan I have followed for some two or three years is to use for this purpose barley-water made from the common grain of the farmer, or preferably the same crushed. It serves to mechanically separate the particles of curd, and has some nutritious properties as well The mucilaginous material comes largely from the inner surface of the hull. In Scotch or pearl barley this is lost.

I give the mother written or printed instructions as to the plan of feeding. I have her use boiled water for dilution, also cream as the child grows older, for I have found that especially where the supply of milk is not first-class, fat instead of being in excess, is often deficient in quantity. The deficiency of sugar is made up by adding sugar of milk. The acidity has not, in my experience, been an important factor.

The plan of quantities and times of feeding according to the age of the child are as follows:

Age of Child.	Cow's Milk.	Barley Water.	Boiled Water.	Cream.	Sugar of Milk.	Intervals of Feeding.
1st. week	4 drams	4 drams	.....	.....	15 grs..	Every 2 hours night and day
Rest of 1st. mth.	6 "	5 "	.....	.....	15 "	Every 3 hours from 4 a.m. till 10 p.m.
2nd. mth.	9 "	6 "	3 drams	2 drams	20 "	Every 2½ hours from 3 a.m. till 10 p.m.
	12 "	6 "	6 "	3 "	30 "	Every 3 hours from 4 a.m. till 10 p.m.
4th. "	16 "	6 "	8 "	4 "	45 "	" " "
5th. "	18 "	6 "	10 "	6 "	1 dram	" " "
6th. "	20 "	6 "	10 "	5 "	1 "	" " "
7th "	24 "	6 "	10 "	6 "	1 "	" " "
8th. "	26 "	8 "	10 "	6 "	1½ "	" " "
9th. "	28 "	10 "	10 "	7 "	1½ "	" " "
10th. "	30 "	10 "	10 "	8 "	1½ "	" " "
11th. "	32 "	10 "	10 "	8 "	1½ "	" " "
12th. "	34 "	10 "	10 "	9 "	1¾ "	" " "

This plan gives as you see six hours rest to the mother and child. Often the child will sleep longer in the morning. Regularity in feeding is a very important matter and should be rigidly insisted upon. At all times if you will, but especially when the external temperature reaches 60° F., it is best to sterilize the milk. Instruct the mother or nurse to do this by placing the bottles filled with milk in a large steamer over a pot of boiling water. From one-half to an hour's steaming will completely sterilize the milk. The bottles should then be tightly corked and set aside in a cool place ready for use. The barley-water is made by adding a cupful of barley whole or crushed to a quart of cold water. This is slowly boiled until reduced to about one pint, when it is strained and set aside.

Care is necessary in the selection of sugar of milk. The cheaper kinds contain a large amount of flour and chalk.

The most convenient feeding bottle is an ordinary 6 or 8 oz. R. S. P. one, of which several should be in use at once. They are easily kept clean.

Conical black rubber teats which fit nicely over the neck of the bottle are the best. *Never allow a tube of any kind to be used.* Both teats and bottles when not in use should after thorough cleansing in boiling water, be placed to soak in a solution of soda bicarb., or a weak solution of permanganate of potash. Never allow the child to suck the empty bottle, this fills the stomach with air.

A properly graduated glass measure which can be purchased cheaply in any drug-store, is both a necessity and a convenience. Measuring by means of a teaspoon is out of date and inaccurate. A wire bracket over a lamp or gas-jet is convenient whereby the food may be warmed at night. The temperature of the food when given to the child should be about 95° F. The quantities I have marked down are, of course, subject to variations according as the child is large or small.

The cream acts well in keeping the bowels regular. If not sufficient an occasional dose of fluid magnesia, P. D. & Co's. cascara cordial, or minute doses of calomel will do very well.

The usual bathing and due attention to cleanliness all help to a good result. Any excoriation of the buttocks should be prevented by careful toilet and the used of borated talcum. Unless the weather is extremely severe, the child, properly protected, of course, should be out one or two hours

a day, summer and winter. In summer when the weather is fine the child should be out most of the time. Good fresh air is essential to good sleep and good digestion.

I think this plan of feeding, meeting, as it does, the essentials of *good quality, simplicity and accessibility* which I laid down as the requisites of an artificial food, deserves a trial. It is not by any means new. It is within reach of everybody, is not complicated, and, in my hands at least, has given good results.

Addenda.—In the criticism which followed, the proprietary foods, consisting as they do, chiefly of starch, which a child under seven months cannot digest, were strongly condemned. I cordially agree with this and advise that they never be used or prescribed.

The question was asked if pot barley or Robinson's barley flour would not do better than grain barley. I do not believe so since they do not contain that which is essential to a good barley-water, viz.: The mucilaginous material which lies immediately inside the hull of the grain. This is *gluten*, which is not starcy but a nitrogenous material composed of *fibrin casein gliadin* and *mucedin* (Foster's Dictionary).

Objection was taken to the quantity of food during first week, viz.: 4 drams of milk + 4 drams of barley-water. I think this may be excessive in some cases where child is small. My quantities are, however, not absolute but more to serve as a guide than anything else. This is necessary. The physician ought to be a better judge as to quantities than any one else, and it would, to my mind, be foolish to give a child all it wants or more, and allow it, as was suggested, to vomit the excess.

One gentleman objected to sterilization at the temperature of steam (212° F.) and said that extensive experiments in New York, showed that babies fed on sterilized milk did not thrive. This is new to me, for sterilization has long been lauded to the skies. My only answer to this question is, that sterilization alone will not suffice. Often milk will, I believe, agree well when sterilization is not pursued, the more especially when the milk is produced at home and not, as city milk frequently is, carted over miles and miles of dusty roads or railway. In winter, I may say that I have not insisted on sterilization, and I have had good results. It has been suggested to me that the food and care of the cows should be looked after. This is an important point. The stable should be clean and airy and the food not too strong. Just as the variation of food or improper food taken by the mother may induce digestive troubles in the baby, it can be no less true with regard to the source of the milk wherewith we prepare the artificial nourishment. I may add that whether or not my plan is correct in theory I am amply satisfied that it is practically so. The best evidences of this is that babies thrive well on it; have few digestive troubles and are sure to attract attention by their hearty, lusty appearance.

EMPYÆMA OF THE MAXILLARY SINUS OR ANTRUM—A CASE.

BY G. R. MCDONAGH, M.D., TORONTO.

The following case in practice presents some interesting features, which vary from the usual clinical history of the disease, and therefore make them worthy of record.

A. C., gardener, æt. 31, came to my office March 6th, 1894, and related the following history:

On the 12th July, 1891, on account of severe neuralgia and dental caries, had all the teeth of the upper jaw removed, and was told by the dentist that one of the molars removed from the left side was ulcerated at the root. The dentist passed a probe into the cavity, but did not find any opening upwards. The plate was fitted in almost immediately and left in place.

Two weeks later Mr. C. noticed that in stooping low some watery fluid dropped from the left nostril, ceasing when he resumed the erect position. This occurred twice only. Some neuralgic pains were also experienced on the same side just above the temporal fossa and the outer angle of the eye. A few days later there was a sudden sensation at the point just referred to, as of something breaking, and a discharge followed from the left nostril, purulent in character.

This has continued up to the present, with exacerbations as regards the quantity. The discharge is white, and like fine curds—with a pronounced odor at times.

Since the onset of the discharge the patient has never been able to lie for more than a few minutes at a time on the left side, as any attempt to do s

is followed by a blocking of the nostrils. On the other hand, when he turns on the right side, the nose remains quite clear and the discharge does not give any trouble.

There have been almost constantly pains of a neuralgic character outside the left temple, in the spot referred to before, sometimes very acute, and accompanied by tenderness, the latter extending well over the orbit. At no time during the trouble has there been pain or tenderness in the left cheek, nor any symptoms referable to the superior maxilla.

During the past three years Mr. C. has consulted several dentists and doctors, one of our foremost rhinologists, and a medical firm in Buffalo, only to be told he had catarrh, the treatment for which proved to be of no avail. Meanwhile the general health had been greatly affected by the discharge, the fetor, and the constant swallowing of the pus, together with the broken rest. On examination, no tenderness could be detected at any point in the upper maxilla, but there was some above the outer part of the left orbit, the test being made by a heavy metal handle struck forcibly against the bone in all directions. Rhinoscopically, the upper part of the nose was found blocked by discharges, which closely resembled casein floating in milk, and which reappeared as fast as removed with the cotton holder.

The formation of the nostril did not allow of a satisfactory view of the middle turbinated bone, but examination with the probe and cotton seemed to point to the middle meatus as the source of the discharge, which evidently proceeded from one of the accessory nasal cavities, probably either from the frontal sinus or the maxillary sinus.

Feeling that the symptoms pointed as clearly toward antrum disease as to that of the frontal sinus, I resolved to open the antrum as a first step.

This was done at my request by Dr. Cæsar, dentist, under gas, a drill being driven through the alveolus in the molar region, and this gave exit to a large quantity of stinking pus. Examination with the probe through the perforation revealed the presence of dead bone in various directions. The cavity was washed with weak bichloride solution by aid of a fountain syringe, and hydrogen peroxide thereafter injected; a silver canula was introduced and held in place by the plate, and the patient instructed to wash the cavity out regularly with a boracic solution, which was afterwards changed for equal parts of hydrogen peroxide and Seiler's solution.

When last seen, May 4th, two months after the operation, the discharge had practically ceased and no dead bone was discovered by the probe. The general health had improved wonderfully and all the head symptoms had completely disappeared, while the patient could sleep soundly on either side, indifferently.

The case is unusual, because *(a)* none of the usual signs of antrum disease, except a one-sided nasal discharge, were present.

(b) The pain and tenderness were confined to the frontal bone, outside and above the orbit.

(c) The patient was compelled to lie on the sound side, while the reverse is the rule in antrum disease.

(d) Discharge from the maxillary sinus is usually bright yellowish.

The locality of the pain complained of may be explained by the connection between the temporal branch of the orbital nerve which supplies the region above the temporal fossa and the posterior dental nerve lying in the outside wall of the sinus, both being derived from the second division of the fifth cranial.

As to the other points I have arrived at no conclusion.

CAUTERIZATION OF THE NARES, AND ACCIDENTS THAT MAY FOLLOW.

BY E. FLETCHER INGALS, A.M., M.D., CHICAGO.

Although from time to time articles have been written to show that serious accidents often follow cauterization of the nares, I think that, when properly done, this operation is quite as free from discomfort or danger as any other minor surgical procedure.

I have occasionally heard of serious results following these operations. but have never had one in my own practice, and I believe that as a rule they are due to carelessness or inexperience upon the operator's part which induce him to make extensive wounds or to repeat the burnings too frequently. By this I do not mean that all accidents after cauterization have resulted from care-

lessness or inexperience, for I well know that bad results after any operation, from various causes, may possibly happen to any one, even though the utmost caution is observed.

Looking over the records of my private patents, I find that hypertrophic rhinitis, intumescent rhinitis, and simple chronic rhinitis, cauterizations have been done about one and one-fifth times on the average in each patient. I find 1,450 patients with hypertrophic rhinitis who have been cauterized 1,950 times; 450 patients with rhinitis intumescens, cauterized 900 times; and 700 patients with simple chronic rhinitis, cauterized 150 times; making 2,600 patients cauterized 3,000 times. These figures are not strictly accurate, but are as near as can be computed without actually counting the cauterizations done in each and every case.

Excluding the cases of simple chronic rhinitis (which have not been frequently cauterized), I find 1,900 cases suffering from hypertrophic or intumescent rhinitis, that have been cauterized 2,850 times, making an average of about one and one-third for each patient, An examination of these records, which have been carefully kept, reveals no serious accident in any case. With comparative frequency, probably in about twenty per cent. of the cases, especially when the cauterization is done in cold weather, patients suffer considerable inconvenience for four or five days afterward from the reaction., and in a limited number of cases, perhaps five per cent., they feel for ten or twelve days afterward as though they had taken an intense cold in the head, In warm weather these very uncomfortable symptoms are not often experienced.

Frequently I have observed patients in whom a linear cauterization across the whole length of the inferior turbinated body would cause excessive swelling, obstruction of the nares, headache, and considerable fever which might last four or five days. In most, if not all, of the cases, if cauterization of half this extent were made, the uncomfortable symptoms would not follow.

The inconvenience which patients suffer after cauterization, as a rule, depends largely upon the extent of the burn, the frequency of its repetition, and the care exercised to avoid taking cold.

I have frequently observed slight adhesions following cauterizations, especially where it has been done opposite a large spur from the septum, and where the patient has not been able to call upon me within the next four or five days after the operation. In none of these, however, has there been any difficulty in cutting the adhesion, or very great trouble in restoring the patulence of the naris.

In one case only do I find serious hæmorrhage to have followed cauterization, and when the patient returned to my office this was checked without great difficulty. In a case of superficial cauterization for hyperæsthetic rhinitis, not included in this series of cases, serious hæmorrhage followed; but I did not see the patient for several weeks after the operation, and thiuk it could have been easily checked if he had been under my care. In no other cases do I find that excessive bleeding occurred.

It is not improbable that in this number of cases there are those who have had slight inflammation of the Eustachian tube extending toward the middle ear, but I am sure that in none of them has there occurred inflammation of any importance, and I am unable at present to find records even of slight inflammation of these parts after cauterization.

The cases of inflammation of the Eustachian tube or middle ear that have been reported as having followed cauterization of the nares, I believe have in most instances resulted either from carrying the electrode so far back that the Eustachian orifice has been burned, from making an extensive wound and thus causing undue inflammatory reaction, or from neglecting antiseptic precautions, though such a result might follow from exposure or from peculiar predisposition of the mucous membrane to take on inflammatory action.

Inflammation of the tonsils is said sometimes to follow within a few days after cauterization of the nares, possibly having some connection with the operation, but I have seen no cases of the kind in which any evidence of cause and effect could be obtained.

Erysipelatous inflammation has been the worst sequel of this treatment that I have ever observed among my own patients, but it has occurred in only four persons out of 2,600. In two of these it seemed to have been the direct result of the cauterization, and in both of them it followed cauterization in the naris whenever it was done. In the other two the dermatitis came on at irregular

intervals after the cauterization, and seemed to have been the result either of cold, or excessive inflammation resulting from some peculiar idiosyncrasy of the patient, either to the burn or to the remedies which were used subsequently.

In two of the four erysipelatous cases that I have seen, inflammation did not come on until from eight to ten days after the operation, and in one of these it recurred about a month after the cauterization, apparently in consequence of an oily spray which had been used in the nares. This appeared to me to be a case in which there was an idiosyncrasy either against the oil (liquid albolene), or the thymol or oleum carophylli which it contained in solution. In the other of these two cases, two cauterizations were done, one of which was followed by erysipelatous inflammation in about ten days, which appeared to me to be the result of an oily spray, similar to that used in the previous case. In this patient redness of the upper lip and cheek continued for a number of days, and was found to increase when the oily spray was used, and to diminish when the cleansing of the nares was accomplished by a spray of saturated solution of boric acid. I have seen several persons in whom the use of a spray containing only two or three grains of menthol to the ounce would cause inflammation of the nostril and upper lip within three or four days. Dr. A. H. Gilmore reports to me a case in which acute dermatitis always followed the use of a one-grain solution of menthol and carbolic acid each in an ounce of liquid albolene within twenty-four hours.

In the two remaining cases the trouble followed closely upon cauterization, the patient seeming to suffer from a peculiar idiosyncrasy in which inflammation of the skin covering the upper lip, the side of the nose, and the cheek would follow speedily after any cauterization within the nasal cavity. In one of these, a healthy young man, thirty-one years of age, suffering from rhinitis intumescents, who was cauterized four times, the erysipelatous inflammation succeeded the cauterization promptly within from twelve to forty-eight hours in every instance, but it was not very severe and only lasted from three to six days.

In the other of these cases cauterization was performed three times, and each time was speedily succeeded by erysipelatous inflammation. Once this came on the same night, the other times within a few days. These attacks gave the patient considerable inconvenience, but caused no danger.

In two instances I succeeded in reducing the inflammation speedily by the local application to the skin of pure guaiacol, recently recommended by L. Bard (*Lyons Medical*, lxxiv., 1893), in facial erysipelas.

I have heard of so many cases in which serious, or at least very disagreeable symptoms have followed cauterization of the nasal cavities, that I am led to believe that the comparative infrequence with which such accidents have happened in my practice is largely due to the care exercised at the time of cauterization, to the antiseptic precautions by which it is followed, and to the rule (from which I seldom vary) that the second cauterization should not be made within from ten to fourteen days after the first. This allows time for the healing process to become well advanced and for all inflammatory action to subside before a new inflammation is set up. In a few cases, where for special reasons I have allowed myself to be over-persuaded by the patient, and have made the succeeding operation in the opposite nostril within from five to eight days, I have nearly always found that the patient afterward suffered great inconvenience from the obstruction, headache and fever. In such cases both sides are likely to become occluded as in severe colds in the head.

My usual course in the treatment of hypertrophic and intumescent rhinitis is as follows:

Having determined that the patient is frequently annoyed, especially at night, by stopping up of one or both nasal cavities, which interferes with nasal respiration and causes a collection of more or less mucus in the nasopharynx, I recommend cauterization upon one side. Whatever subsequent cauterizations are needed should be made at intervals of not less than two weeks if upon the opposite side, or at longer intervals if upon the same side. Immediately after cauterization, the nasal cavity is sprayed with a solution of five minims of the oil of cloves to the ounce of liquid albolene, and this is followed by the insufflation of two or three grains of iodol. The nostril is then packed lightly with cotton, which the patient is directed to wear whenever he is out of doors for the succeeding four or five days in

winter, or for two or three days in summer, changing it as he may desire. The patient in most cases is also given a powder, one or two grains of which he is directed to use in the naris three or four times in twenty-four hours, providing the passage closes up by swelling—or not at all if this does not occur. This powder contains bicarbonate and biborate of soda, each one and one-half per cent., light carbonate of magnesia 3 per cent., and cocaine hydrochlorate four per cent., in sugar of milk sufficient to make ʒi; this gives in all not more than from one-twentieth to one-twelfth of a grain of cocaine daily.

This is applied by means of a glass tube about four inches in length, with a caliber of about one-eight of an inch, to which is attached a rubber tube, through which the patient blows the powder into his nose. The glass tube is disconnected from the rubber, its round end moved about in the powder until it is filled up about one-fourth of an inch; the same end is then reintroduced into the rubber tube, and the flattened end of the glass tube introduced into the nostril. The patient then places the other end of the rubber tube between his lips and gives a quick strong puff, which forces the powder far into the naris, some of it usually going through to the naso-pharynx. The patient is also given a solution of one-third of a grain of thymol with three or four minims of the oil of cloves to the ounce of liquid albolene, which he is to use in the nose thoroughly as a spray three times daily.

In many cases the cauterization is followed by immediate relief of the obstructed feeling in the nose, but in the majority the cavity is nearly closed much of the time for three or four days subsequently. The patient is directed when practicable to return to me in four or five days, in order that I may be sure no adhesions are taking place. At this time the powder just mentioned is reduced by the addition of twenty five per cent. of iodol, and the patient is directed to use it for the next ten days, once a day only, if the naris does not stop up, or twice if it does. The spray is continued. Patients are never allowed to use any powder containing cocaine for more than three or four weeks continuously, and then only in small quantity, and they are not given prescriptions for it, which might be refilled and thus engender the cocaine habit.

I believe that the best results are obtained by making a linear cauterization the whole length of the inferior turbinated body, usually at the juncture of its middle with its upper or lower third. Commonly two cauterizations, occasionally three, and rarely more, are needed upon each side. In persons in whom the inflammatory reaction is severe after cauterization, a linear cauterization of only half this length should be recommended. Those who cannot tolerate the full cauterization constitute about five per cent. of all those needing the operation.

Before cauterizing, the parts are thoroughly anæsthetized with a four per cent. solution of cocaine, applied by means of a small pledget of cotton wrapped upon a flat applicator; this pledget is moistened in the solution and carried quickly to the back of the nasal cavity. In bringing it forward it is rubbed over all the surface to be anæsthetized, the application requiring about thirty seconds. At intervals of about a minute these applications are repeated, and usually two or three are sufficient to produce complete anæsthesia. A knife-like electrode, having at its end a No. 21 platinum-wire blade about three-fourths of an inch in length, is then introduced to the back part of the nasal cavity and turned against the tissue to be cauterized. The current is then turned on and the electrode is drawn slowly forward to the anterior end of the turbinated body, burning through the soft tissues so as to just graze the bone in two or three places. Sometimes when the tissues are thick, the electrode has to be moved slightly back and forth two or three times before the bone is felt. It is my desire in all these cases to touch the bone lightly in the posterior, middle, and anterior parts, in order that the soft tissues may be firmly bound down when cicatrization takes place. More extensive cauterization than this at one time is seldom justifiable, because it causes such intense inflammation. I am not at all in favor of the frequent cauterizations, daily or every three or four days, which some physicians practice in treating hypertrophic rhinitis; neither can I see any necessity for causing the patient to return to the office every day or two during the treatment. When patients come to see me from a distance of two to four hours ride, I usually make one cauterization and then direct them to follow out the after treatment

carefully at home, and return for cauterization upon the other side, any time that suits their convenience after three weeks; but I prefer, when it is practicable, to see the patient once at the end of four or five days after the cauterization, in order that I may be sure that all is going well. In a very few cases, either because of unusual pain or excessive inflammation and swelling, I find it desirable to see the patient within two or three days after the operation.

From a study of these private cases I conclude:

1. It is important that antiseptic applications be regularly employed after cauterization of the nasal mucous membrane; and that the nostril be closed by cotton for several days whenever the patient is out of doors, to prevent taking cold.

2. As a rule, at least two weeks should intervene between operations upon opposite sides, and three or four weeks between those on the same side.

3. No serious results are at all likely to follow cauterizations made in this way.

4. Practically all cases of hypertrophic or intumescent rhinitis may be cured by this treatment, though occasionally portions of the turbinated bones must be removed.

Selected Articles.

THE POSTURE OF THE HEAD IN ACCIDENTS WHEN THE PATIENT IS UNDER AN ANÆSTHETIC.

In the presence of an accident from an anæsthetic, the physician at once resorts to artificial respiration, after administering circulatory stimulants, and carries out his object by resorting to one of the several methods generally recommended for this purpose.

Be this method what it may, some studies which have been made with Dr. Edward Martin lead me to believe that it is of little value if the posture of the patient's head and neck is not correct, since the positions naturally assumed by the head of the patient at such times are generally capable of making all efforts at artificial respiration difficult or impossible.

As long ago as 1889, Howard, of London, published a very interesting paper on this topic, which has since been widely quoted. While recognizing the value of his studies, my own have led me to reach somewhat different conclusions in regard to the posture of the head and its influence on the patulousness of the windpire, and it is to these studies that I ask your attention. Howard's statements in regard to the rôle of the epiglottis in cases of arrested respiration in anæsthesia are as follows:

1. The epiglottis falls backward in apnœa and closes the glottis; therefore, the first thing in order and importance is the elevation of the epiglottis.

2. Traction upon the tongue, however, whatever the force employed, does not and cannot raise the epiglottis, as supposed.

3. The epiglottis can only be raised by extension of the head and neck.

The question which naturally arises first is, Is Howard correct in regarding the epiglottis as the cause of the obstruction? Personally, I believe he is wrong, because in the great majority of cases the air passages are at once cleared of obstruction simply by drawing the tongue forward, a method resorted to by all of us, yet one which, as Howard himself states, and as we have proved, has absolutely no effect on the epiglottis unless the traction is applied well back on the dorsum of the tongue by a tenaculum. We may conclude, therefore, that the epiglottis is not the chief cause of the obstruction, and that the tongue is more frequently at fault, but as any obstruction is undesirable, and as the epiglottis does sometimes certainly partially close the windpipe, what shall be done to govern its position? Howard states that this may be accomplished solely by the posture of the head. The method which he recommends is as follows:

"Having, by bringing the patient to the edge of the table or bed, or by elevation of the chest, provided that the head may swing quite free, with one hand under the chin and the other on the vertex, steadily but firmly carry the head backward and downward; the neck will share the motion, which must be continued till the utmost possible extension of both head and neck is obtained. Sometimes a slight elevation and extension of the chin will at once check stertor or irregularity of breathing; but understand, the extension, which can in no case do harm, should always be rather more than appears necessary. It should never be forgotten, however, that the full effects of extension as above described can be secured with certainty only by making the extension complete as directed."

Once more the studies which I have made of this subject have convinced me that Howard's advice is not practically valuable. Although there can be no doubt that the changes described are produced, so far as the position of the epiglottis is concerned, on the other hand, such a position of the head and neck as he directs has the effect of strapping the soft palate over the dorsum of the tongue, thereby cutting off the entrance of air through the mouth and renders

the nostrils the only path for its entrance. As the nasal cavities are in many persons obstructed by exostoses, hypertrophies or polyps, the nostrils do not afford a sufficiently certain entrance space for air, and removal of glottic closure by this posture may cut off the air higher up.

If, on the other hand, the head is extended and simultaneously projected forward, both the tongue and epiglottis are raised and the soft palate is so drawn as to permit of free breathing through the mouth as well as the nose. This is shown in the specimen which I now show you, in which the basilar process of the occipital bone is chipped away and the naso-pharynx exposed.

Returning to the question of the various modes of performing artificial respiration, such as Sylvester's or Marshall Hall's, let us see what accurate measurements of the volume of air pumped into the chest show as to their relative value. To determine this point, the respiratory tract was connected with an ordinary gas meter, properly adjusted by means of a two-way tube, through one valve of which the air entered readily, whiie it could only escape through the meter. Curare was used to prevent voluntary breathing. When the Sylvester method was used, the quantity of air passing out of the chest equalled 62; when that of Marshall Hall was employed the quantity was represented by 22. In another experiment the Sylvester method gave 18, while the Marshall Hall gave 8. It is evident, therefore, that the Sylvester is actually, as we have long believed it to be, by far the best method. In this connection it was found that in Sylvester's method it is vitally important to have an assistant grasp the feet and hold them motionless, since in this way the extension and upward traction of the arms above the head elevates and dilates the chest. This particularly is the case in children and persons of small weight, as the lower segment of the body readily follows the chest in its upward movement.

Very closely connected with the questions first considered is the condition of the respiration, so far as its nervous control is concerned, in accidents from chloroform and in shock and cerebral concussion. The position of the medical profession is at present uncertain in regard to the dominant action of chloroform, chiefly because of the contradictory views expressed by special students of its powers, and the teaching of certain leading therapeutists and surgeons whose opinions are radically different. Further than this, many experimental investigations have seemed to reach quite different results and have apparently left the subject more clouded than ever. Aside from the question, long since settled, that chloroform is the more dangerous anæsthetic in its immediate effects, we may without difficulty reconcile nearly all the contradictory results so far obtained if the individual researches are carefully studied, and as a result of such reconciliation reach the absolute conclusions so necessary in so important a subject. The conclusions are as follows, namely, that after its primary effect on the vaso-motor system, the dominant action of chloroform is certainly upon the respiratory centre in the medulla, and that this effect is the cause of death in most cases of chloroform accident. Not only does nearly all experimental work teach us this, but in a collective investigation made by me some time since as to the cause of death in man under chloroform, nearly every case reported was found to have suffered primarily from respiratory arrest. These statements are based first upon the report made by myself and my assistant, Dr. Thornton, to the Hyderabad government in India, and upon the confirmatory, but entirely independent, studies of Randall and Cerna recently completed in Texas, in which these investigators took up the study to prove that our studies were erroneous, and were forced to admit that death is due to respiratory failure.

Believing, then, that death is generally due to this cause when chloroform is given, it is incumbent upon the anæsthetizer to watch the respirations, both because death creeps on in this way, and also because the rapidity and depth of breathing governs the dose of the drug, for the dose is not the amount poured on the inhaler but the amount taken in vapor into the chest. Lawrie's assertion that chloroform should be given only while the respirations are regular, and withdrawn as soon as they are stormy, is most wise.

While I believe the respiratory action to be the dominant one in producing death as a rule, no one who has studied the effects of chloroform can deny that death may occur under its influence, in cases which are diseased, by its cardiac effect Any shock may kill a case of cardiac disease, and it is natural, therefore, that any drug which possesses the peculiar influence of chloroform over the heart may be prone to cause death in this way.

In other words, supposing that the amount of depression from very full doses of chloroform equals 25 units, this amounts to little in the normal heart; but if the heart be depressed 25 additional units by disease, the depression of 50 units may be fatal, particularly if to this 50 is added 25 units more of depression through fright and cardiac engorgement, through disordered respiration or struggling. That true depression of the heart-muscle may take place under chloroform seems to us most undoubted, as we think that the tracings in every research that we have seen support this view. There is always a decrease in cardiac power manifested by the decrease in the force of the individual pulse-beat, and this passes away only if chloroform is removed

early enough. We also agree with McWilliams that from the very first inhalation of chloroform there is a constant tendency to cardiac dilatation.

Closely associated with influence of chloroform on the vital functions, is its influence upon the blood-vessels, which, as already stated, is its primary and dominant effect. This influence I believe to be very much more worthy of attention than is generally recognized. Every physiologist knows that the action of the heart and respiration is greatly influenced by vaso-motor relaxation. The gasping respiration of sudden faintness is probably due more to sudden vascular dilatation than to direct failure of the heart, and the exceedingly rapid pulse of shock is seen in conjunction with the relaxed blood-vessels so characteristic of this state. The integrity of the vaso-motor system is as necessary to life as the integrity of the heart, since it is under the government of this system that the cardiac mechanism is active and the vital interchanges take place throughout the body. Acting upon this belief I have found both in the laboratory and at the bedside that atropine enables more chloroform to be given without circulatory depression than can be used if no atropine is administered, and there is good reason to believe that the use of atropine by surgeons for the purpose of stimulating the respiratory function, or preventing cardiac inhibition by irritation of the vagus, in reality prevents dangerous symptoms chiefly by its vaso-motor influence.

For some months I have been interested in studying the condition of the respiration in cases of traumatic shock, and it is surprising to note how death comes from failure of this function in distinction from failing circulation. Further than this, the employment of artificial respiration in these cases will often save life.

Very recently, in cerebral concussion, Horsley has called attention to these facts and has practiced artificial respiration with good results in apparently hopeless cases.

DISCUSSION.

Dr. Kelly.—We give chloroform frequently in the Gynæcological Department, and, although in a very dangerous atmosphere, I also gave it in Philadelphia a great many times, before coming to Baltimore, but always in dread, because Dr. Wood, of the University of Pennsylvania, had said that any surgeon having a death from chloroform should be indicted for murder. The main reason why Philadelphia surgeons are afraid of chloroform is because they do not know how to give it. In abdominal surgery, chloroform is better than ether, as it gives a quiet anæsthesia, rapidly produced, and its after-effects are not so disagreeable. My personal preference, save in cases of grave cardiac complications, as a dilated heart, or where there is failure in compensation, is always for chloroform. As I leave the choice of the anæsthetic, however, to my anæsthetizers, I find that in a large majority of cases they select ether. I never ask an assistant to give chloroform who is averse to it, especially if he has not been accustomed to its administration. The man who administers chloroform should be afraid of his anæsthetic. He should watch his patient closely, and constant attention should be given to respiration, pulse and general appearance. Since the results of Dr. Hare's researches have been published, in which he proves that the respiration is the important factor, and fails first before the heart, we pay more attention to the respiration than before.

Regarding methods of resuscitation, I have found a method of my own exceedingly satisfactory. I have treated about fifteen cases with uniform success by this method, which I believe to be the best for keeping up artificial respiration. I find, too, that I have been following the principle laid down by Dr. Hare—that of the extended and slightly flexed head. On the first indication of failing respiration the administration of the anæsthetic is instantly suspended, and the wound protected; if abdominal, a broad piece of gauze is laid over the intestines under the incision. An assistant steps upon the table and takes one of the patient's knees under each arm, and thus raises the body from the table until it rests upon the shoulders. The anæsthetizer, in the meanwhile, has brought the head to the edge of the table, where it hangs extended and slightly inclined forward. This position is similar to that described by Dr. Hare, and resembles that taken by the runner when he is breathing hard. The patient's clothing is pulled down under her arm-pits, completely baring the abdomen and chest. The operator, standing at the head, institutes respiratory movements as follows: inspiration by placing the open hands on each side of the chest posteriorly over the lower ribs, and drawing the chest well forwards and outwards, holding it thus for about two seconds; expiration, reversing the movement by replacing the hands on the front of the chest over the lower ribs and pushing backwards and inwards, at the same time compressing the chest. The success of the manœuvre will be demonstrated by the audible rush of air in and out of the chest.

The heart and pulse should be constantly watched. As respiratory movements are continued, a little flickering pulse-wave will be observed at the wrist, which shortly becomes faint and regular, and gradually increases in strength. From ten to thirty of these acts of induced respirations will usually suffice to excite voluntary respiratory movements, which begin with short, jerky, gasping breaths, becoming louder and then regular. The movements must

then be timed to suit the natural efforts. As the depth of inspiration increases, the color slowly returns, the pupils contract, and the danger is past. In women with contracted, fusiform chests (tight lacers), this procedure is not available; in such cases respiration should be induced by direct antero-posterior compression of the chest by placing one hand on the lower third of sternum, and the other on the back opposite the first, and alternately squeezing the chest and relaxing the pressure, when air will be audibly forced in and out, and the patient revived as by the previous method; it also fails in a rigid old chest.

The suggestion which Dr. Osler once made concerning the use of external heat during the administration of an anæsthetic in a prolonged or a severe operation, is a very important one. Dr. Osler especially impressed me with this fact two years ago on his return from London, where he had seen Horsley conduct his experiments in brain surgery on monkeys which were kept on a warm table during the operations. Horsley lays especial stress on keeping up the body temperature, to prevent shock. Following this suggestion, I have recently had narrow hot water bags made, three feet long, which we keep in the operating room, and in case the operation is to be prolonged, or the patient is feeble, we place one on either side of her body and an ordinary water bag at the feet. I am indebted to Dr. Hare for several important hints, especially concerning the use of atropine in cases of disturbed respiration. I am also glad that he has placed the principle of the proper position of the head upon a scientific basis.

Dr. Osler.—With reference to the position which Dr. Kelly puts the patient into, I will mention the very interesting experiments made in Dr. Sanderson's laboratory in Oxford by one of his assistants upon the influence of position on blood pressure. With a very carefully adjusted turn-table, the blood pressure was found to rise immediately as the lower extremities of the animal were raised.

Dr. Halsted.—I am pleased to hear what Dr. Hare has said, and I am sure that the position of the head which he advocates is the correct one. It is the position which we always use. We have learned to use it from experience. Dr. Hare said, "Now you have got the position," when I was testing on the cadaver our position in order to see whether or not it opened the glottis. In pulling the jaw forward as we do it, one necessarily extends the head. In anæsthetizing a patient we always catch the jaw close to the condyle and press it as strongly forward as possible, and so keep the glottis open. If this is properly done it will never be necessary to pull the tongue forward with an instrument. It is not, therefore, the extending of the head which opens the glottis. If we were to extend the head by pulling the ears we should not open the glottis. The extension of the head is simply incidental to the drawing forward of the jaw. I agree with Dr. Hare when he suggests that we might make use of atropia oftener than we do. It is a drug upon which we can rely to increase arterial tension. But morphia is a vaso-motor depressant and lowers arterial tension; hence I do not use it in conjunction with ether. I am afraid of chloroform, and do not use it. In Germany, where they certainly ought to know how to give it, where they use it almost exclusively, and write a great deal about the proper method of administering it—giving it drop by drop, a drop with each inspiration—they have had more deaths this year than ever before from chloroform, 1 to 1,600 or 1,700, according to Gurlt's statistics. For the last ten or twelve years, Gurlt has, as you know, gathered statistics from the different German universities. The usual mortality is 1 to 2,200 or 2,300. This year from every university in Germany, almost without exception, the mortality from chloroform has been greater than for many years. This is very remarkable unless the manufacturers of chloroform are to blame. One death should be enough to deter a man from ever using it again. Dr. Lange took Dr. Kelly's attitude for a good many years, then he had a death on the table and said that he would never give chloroform again. It is perhaps possible to give morphia in so small a dose that it may for a few moments act as a vaso-motor stimulant and increase the arterial pressure, but in moderate, and particularly in large, doses it lowers arterial tension most pronouncedly. These statements are supported by the highest authorities, and I take pleasure in calling Dr. Hare's attention to them.

Dr. Hare.—A characteristic symptom of the first stage of opium poisoning is a slow, full and strong pulse, and, therefore, the arterial pressure must be high.

There are one or two points raised in the discussion that I would like to speak of.

I thoroughly agree with Dr. Kelly, although I am one of the much maligned Philadelphians in this instance, when he says that many persons don't know how to give chloroform in Philadelphia. In two of the cases in which I have seen accidents occur, the chloroform was given very much more as if it was ether than if it were chloroform; and in the last case I saw, after the woman was once resuscitated, the resident physician two minutes later pulled the napkin over the patient's mouth and poured on about ½ ounce of chloroform, so that her pulse was lost at the wrist and her breathing stopped a second time.

In regard to atropine, I think we do not use large enough doses of this drug. When I was a student, a proper dose of atropine was 1-250 gr., and of strychnine 1-160. Now some surgeons

give as much as $\frac{1}{6}$ gr. of strychnia, and atropine in the dose of 1-100 to 1-500. Atropine is a better drug than we think it is, and does not get the credit it ought to have, simply because we do not give it in large enough doses. One one-hundredth of a grain would be a very proper dose, and I have given myself, in cases in which I had reason to believe there was a condition of vaso-motor relaxation, very much larger doses, proportionately, than this. In a child of eight months, I have given 1-150 gr. of atropine twice in eight minutes, and I believe that it saved the child's life

This leads me to emphasize one other point which I am almost afraid to speak of, because I have emphasized it so often, particularly to the students of Jefferson College; I am confident that we let many cases die on account of vaso-motor relaxation. When you see the diagrams in the books on physiology, of the enormous area of the vascular system when relaxed, and the capacity of it as compared with the arteries and veins, and when you read of the influence of vaso-motor relaxation in producing tachycardia and cardiac exhaustion, then you can appreciate the importance of the vaso-motor system in maintaining life. In pneumonia, when you have a very feeble and very rapid heart, don't think that because the htart is rapid digitalis should be given. It is extraordinary the way the action of the heart will improve just as soon as you develop the normal resistance of the vascular system. The heart working against a relaxed vascular system is in a worse condition than when working against a vascular spasm, such as we have in chronic nephritis.

(To be continued.)

MEDICAL TREATMENT OF THE DISEASES OF THE STOMACH.

(Concluded from March Number.)

Excess of acid, however, is more frequent. Its over-secretion may be due to chronic gastritis, ulceration or neurosis. In some instances it is due to a chronic dyspepsia, depending on the abuse of tobacco or of alcohol, or both. With the exception of the cases of over-acidity from ulcer which yield a local pain, that excess is characterized by a more extensive pain than is attributable to a local lesion. Whatever excites the gastric secretion must be avoided. Instead of choride or bicarbonate of sodium, of aromatics, of acids, give nitrate of silver 1 to 3,000 to 6,000, in tablespoonful doses, also some opium. If a purgative be required, give sulphate of sodium. Not infrequently the over-secretion of hydrochloric acid accompanying the first stage of a subacute gastric catarrh gives way, in the further stage, to under-secretion. In that case the treatment of the catarrh, including irrigations, is indicated.

The treatment of ulceration will be referred to later.

The neurotic cases require slow eating to avoid suddenness of secretion, more animal food but no fat, no carbonic acid, and the treatment of the neurosis of the stomach, which will be detailed later on.

In all cases antacids are indicated, such as prepared chalk, bismuth, or magnesia, but they are liable not to have the same favorable effect as when they are given when the secretion is not of hydrochloric but of butyric acid, which is the principal and most objectionable result of undue fermentation. The presence of this acid is an obstacle to digestion and ought to be neutralized before food is taken. Magnesia must be given ten minutes before a meal in sufficient doses. Quite often the presence of this acid accompanies a chronic catarrh with insufficient gastric juice. Thus I frequently, after giving the antacid before every meal, administer pepsin and dilute hydrochloric acid toward the end of, or after it.

Round ulcer of the stomach requires, theoretically speaking, absolute rest of the stomach until the ulceration can heal. That indication cannot be filled. But the only food endured and permissible is milk, not to be drunk, but eaten with a teaspoon. It ought to be boiled or sterilized, and the stomach kept alkaline. Magnesia can be taken in daily doses of two or three grammes for some time without giving rise to diarrhœa. If larger doses of alkali than the above be required, and diarrhœa be feared, bismuth may be added from two to four grammes a day, or prepared chalk, or phosphate of lime. It is desirable to take no carbonate, not even the sodium salt, in order not to inflate the stomach. The total daily amount must be given in eight or ten doses. They may be so arranged as to precede by a few minutes the meals, which ought to be small but frequent. Opiates will enforce rest, and are, in the beginning of the treatment, in doses of from 10 to 15 milligr. every two or four hours, almost indispensable. Irrigation ought to be avoided as a rule. I have, many years ago, irrigated with a high dilution of nitrate of silver. Bismuth subnitrate has been thus used, but instruments are dangerous inside an ulcerated stomach, and bismuth taken internally will probably cover the sore surface as well as if throwh in when suspended in water.

The vomiting and neuralgia of neurotic persons are frequently the despair of the physician. They are as curable and incurable as other symptoms of hysteria. By attending to the person you may conquer the organ. So the medicinal and hygienic armamentarium will be in pressing demand. Opiates ought to be avoided if barely possible. Cocaine

has been recommended very highly; I cannot say that I have seen it do much good. It has been customary to employ cerium oxalate, mainly, in the vomiting of pregnancy; nitrate of silver has failed me entirely in these cases. Three remedies have often aided me. One is the tincture of iodine, in half to one drop doses every one, two or three hours, the other is arsenious acid, in doses of one-third or one-fifth of a milligramme every two or three hours, and zinc, either the valerianate from seventy-five to one hundred and twenty-five centigrammes daily in divided doses, with or without bismuth, or the oxide in four or six daily doses of from two to 5 centigrammes each. Menthol and alcohol (1 to 10) applications to the præcordia have sometimes proved successful. In the vomiting of pregnancy, wine of ipecac, one drop every hour, has given satisfaction. One of the symptoms of stomach neurosis is rumination, regurgitation of part of the food taken. Though the symptom be by no means rare, I do not remember a case, in adults or children, but exhibited quite an array of neurotic symptoms. Thus general tonics, sea-bathing, cold ablutions and frictions, strychnia, zinc, ferri carbonas, are the remedies required. Electricity—the interrupted current—will sometimes prove effective, one electrode over the neck, the other over the epigastrium. Often the metal brush, short applications, works better than the wet sponge.

There are other cases of vomiting having their origin in distant parts. Chronic peritonitis with adhesions will result in obstinate constipation. Now constipation, from whatever cause, is liable to give rise to obstinate vomiting, extending over many weeks, even months. I have seen them relieved by purgatives and rectal irrigations. *Qui bene purgat bene curat.*

When vomiting attends acute gastric catarrh, and is so persistent as to render both feeding and medication impossible, calomel, given in sufficient doses, will be absorbed in the mouth, and have its full effect as a purgative. Now and then leeches, ice, hot fomentations, dry cupping, may relieve the gastric congestion or irritability. When food is thrown up after being taken, a small dose of morphia on the tongue, in solution or in tablet form, five or ten minutes before eating, will make it endurable. In this way even anæmic vomiting can be moderated.

In cases of protracted fermentation in the stomach, attention must be paid to the foods and other ingesta; among the latter too the swallowed secretion of the nose and pharnyx. Many a case of putrid dyspepsia can be effectually cured in the nose and mouth, Irrigation of the stomach with water, salt water, salicylic acid 1 to 1,000, thymol 1 to 2 to 3,000, or hypermanganate of potassium 1 to 2,000 will find their indications. But they cannot be employed forever, and in most cases the powers of the stomach will not be restored by them. Among the anti-fermentatives I mostly use is dilute hydrochloric acid. Thirty or forty drops in a quart of water, will form an appropriate drink through twenty-four hours. Bismuth and its phenol combinations act very well, but not by themselves alone. Creosote in daily doses of from eight to twenty-five drops, creolin in similar doses, plentifully diluted, act very well. So does hypermanganate of potassium, 1 to 2,000, in frequent teaspoon or half tablespoonful doses. Resorcin, from seventy-five to one hundred and fifty centigrammes a day, divided into four or six doses, one to be given fifteen minutes after meals, and now and then between, mixed or not with bismuth; bicarbonate of sodium acts very well. Calomel acts better on the intestine than on the stomach. Chlorine, iodoform, and napthaline have been given for the disinfection of the stomach. But stomachs which require disinfection are generally too irritated and irritable to tolerate just these three. Aromatics may be given. Fennel and mints have been added to the "National Formulary." They are pleasant and efficient additions to bismuth, calomel etc., in children's ailments.

HÆMORRHAGE.—No sounding, no irrigation. Seldom will the stomach as much as tolerate chloride of iron or acetate of lead. Besides, in the doses which can possibly be introduced, they do as little good in hæmorrhages from the surface of the stomach as another integument. Avoid the internal use of alcohol or carbonated waters; avoid even water. Ice internally may do good by contracting the stomach; its direct influence on the bleeding vessels can be but trifling. Ergot preparations may be employed under the skin. It is desirable to keep the stomach contracted by a heavy ice-bag, which acts both by its weight and its temperature. The body must be kept at rest, recumbent; if any food be permitted, that will be iced milk in small quantities. Bismuth subnitrate is probably the only thing which is both tolerated and useful. Rest can be procured both to mind and circulation through the hypodermic use of morphia.

Cancer of the stomach, both near the pylorus and on the wall of the organ, has more indications than successes. We shall hear to-night of what surgery feels like doing, and in quite a number of instances has succeeded in doing, for cases the nature of which could be exactly diagnosticated by the presence of a perceptible tumor, by decrease of strength and weight, scantiness of urine, etc. May be we shall even be told that ulceration and severe hæmorrhages demand and permit surgical interference. Before that, however, there will be other indications. Loss of appetite may be benefited by bitters, nux, calumba, and, best of all, condurango. Anæmia requires mild preparations of iron; constipation, a vegetable purgative, but no saline;

pain, morphia internally or subcutaneously, but no chloral hydrate, which must be avoided in all conditions of irritability; eructatation, charcoal or creosote; vomiting, morphia, creosote, hydrochloric acid.

Can we do more than simply treat the secondary symptoms? To a certain extent we can. A hundred cases of carcinoma which have come under my observation within these five years convince me of the efficiency of methylene blue. There are but very few patients but, if we commence giving small doses, say one to two grains daily, tolerate it well, and very few but are relieved and improved by it. I am not the only observer who has seen large tumors in any part of the body reduced in size by it, and smaller ones rendered almost imperceptible. If we cannot preserve life to threescore and ten, we can prolong it.—A. Jacobi, M.D., in *Med. Rec.*

NEURALGIÆ.

It is quite astonishing how many women suffer from various neuralgiæ, how severely they suffer, and how difficult it is, without understanding the apparently unlikely causes of the complaint, to cure them. Here is a case which is, in its way, very typical of many. She complains of violent neuralgic attacks which either affect, she tells us, the right breast or the right eyebrow and eye. Sometimes the pain is in one position, sometimes in the other. But, she says, that she is hardly ever free from it in one or the other position, though she rarely has pain in both sites at the same time; and at present, she has the forehead neuralgia. You see, upon examination, that her teeth are fairly sound, that there seems to be no marked caries of any tooth, and she assures us that she has been sent by several doctors to the Dental Hospital, and has always been told, there, that her teeth are not at fault. You are doubtless aware that in many women this neuralgic pain over the forehead is associated with some defect in the ocular muscles, and I have seen a good many cases in which a persistent pain in the forehead, even over one eye, has been cured by the use of appropriate spectacles. As a matter of fact, when the eye accommodation is at fault, I believe the headache is more commonly of a dull, aching character, and is referred to the whole forehead. But in this patient there appears to be no disturbance of sight at all. To prevent the chance, however, of any error, I will send her to an eye hospital and ascertain if there is any local reason for this neuralgia. There appears to be no disease in the right nostril, and, as you know, neuralgia sometimes arises from such a cause. Her ears are perfectly normal, her hearing is unaltered; in other words, there appears to be no local cause for this neuralgic pain. Now, in the breast there is a small adenoma, but it is in the left breast, not the right; she complains of no pain from it, and it is quite small and harmless. In the right breast, there is absolutely nothing abnormal. So far as her chest goes, there is no evidence of any pressure from an aneurism or an intra-thoracic growth, which, of course, are well recognized causes of nerve pains. The breath sounds are perfectly normal, the heart sounds are clear and healthy, the apex beats in its normal position, the action is perfectly regular. Now, it would hardly at first sight, perhaps, occur to you that there could be any uterine cause for the trouble, but if you remember the intimate connection which exists between the uterus and the breast, and I would add, which appears also to exist between the ovary and the eye, you will, in such cases as these, make a careful vaginal examination. It is by no means uncommon to find in women suffering from some chronic disease of the ovaries, neuralgic pain referred to the eye of the affected side, just as it is equally common to find breast pains associated with chronic uterine mischief.

Examination of the pelvic organs of this patient shows that she has a large sub-involuted uterus, and an enlarged, hard, prolapsed, and very tender ovary, and further inquiries elicit the fact that ever since her last confinement, four years ago—during which time, we now learn, she has suffered from this neuralgia—she has had a more or less constant throbbing and dragging pain above the right groin; in other words, she is suffering from chronic ovaritis. It is quite likely that she has had one or more abscesses in the ovarian tissue, and that these have set up more or less inflammatory thickening in the gland. Certainly the prolapsed condition of the organ, and the consequent interference with its blood supply, must have tended to produce a chronic congestive condition of the ovary, and this has doubtless been intensified by recurring attacks of pain and irritation from pressure in coitus on the prolapsed organ. The treatment, therefore, which I propose to adopt for the relief of her neuralgia is twofold. We must improve her general health, which is evidently considerably deteriorated, and we must treat, and endeavor to remove, the local condition and cause of pain. Now, for the first indication, there is nothing equal to cod liver oil combined with hypophosphites, and an occasional dose of bromide of ammonium and antipyrin if the pain is excessive. The tonic will have to be taken regularly for some time, and you hear from her that we have probably been in this matter already forestalled, because she says she has received a syrupy tonic from one hospital—perhaps the syrup of the hypophosphites—and at another was ordered to take cod liver oil; and she tells us

that neither treatment did her any good. Still, the principle is correct, and we will ask her to persevere with these combined medicinal measures. Meanwhile, what can we do towards improving the local condition? Now, in order, first of all, to remove the ovary from harm's way, and to restore it as far as possible to its right position, nothing is so useful as a thick ring pessary large enough to encircle the cervix well, and at the same time to lift the ovary up, without so far encroaching on the vaginal wall as to cause pressure thereupon. The immediate relief which this appliance affords in many of these cases is very great, and here you observe that a No. 2½ ring is sufficient for the purpose, and that with this in position, the ovary cannot be felt. The next item of treatment is the use of frequent injections of Condy's fluid and hot water, which will soothe and greatly relieve the ovarian congestion. I have also found blisters frequently repeated above the groin of the affected side give very often good results in some of these cases; and we will tell her to paint such blisters for herself, each about the size of a half crown, to be repeated twice a week, each time, of course, over a different surface. In many of these cases, the improvement which follows this line of treatment is speedy and very marked, and the curious connection between the local cause and the far-off pain is sometimes shown by the disappearance of the distant neuralgia, and the onset of pain at the site of the actual causative disease. So I have known patients lose their neuralgia in the breast or eye and complain of a dull aching pain over the affected ovary.*

Here is another case, which is very similar to the one we have just seen. She came here about three months ago complaining of neuralgic pains in the breast. There was nothing abnormal in the gland, but she was suffering from an ovarian tumor. She was taken into the hospital, and the cyst was removed, and now she has merely come to report herself. She is much stouter and stronger than she was, and has had no pain since the operation—in fact, she appears to be, as she expresses it, "quite cured."

Last summer, I saw a lady who had for some months been suffering from violent intercostal neuralgia. She had been placed under the care of an eminent specialist, on the supposition that there was some deep-seated thoracic mischief. The pain in the intercostal space became so excruciating when she stood up, that for some time she had been confined to her couch. She improved under perfect rest and tonic treatment, and it was quite an accidental circumstance which led to my being asked to see her. When I examined her, however, I found that the left ovary was greatly enlarged, cystic, and tender. She was suffering, in fact, from a quickly growing ovarian cyst. Leeches over the left groin relieved the intercostal neuralgia almost at once, and hot injections and glycerine plugs, with a continuance of the same tonic she was previously taking, were sufficient to relieve the pain, and she only suffered from occasional attacks. The cyst, unfortunately, continued to develop, and about three weeks ago it was removed, and since then she has been entirely free from the pain in the chest. I do not offer any explanation as to the reason for this pain, or as to the precise connection which exists between ovarian disease and intercostal neuralgia; but it is a practical point of very great importance, to which I would direct your earnest attention, that in a large number of cases of ovarian disease this intercostal neuralgia is a troublesome symptom. It is a matter which, so far as I know, is not referred to in the text-books at any length, but of which you will, doubtless, find cases in your practice amongst women. As a general rule, I believe these patients are out of health, and in one instance at least which I can recall to mind, the neuralgia occurred on the right side after a blow, although it persisted for weeks after the resulting bruise had disappeared, and, indeed, was not cured until measures had been taken to relieve the ovarian trouble which had been previously in existence, but which had not until then caused the neuralgic pain.

Finally, while on this subject of intercostal neuralgia in women, I would narrate a case which is typical of many. A well-known literary lady, who had been working against time in order to produce a book demanded by her pub lishers at a certain date, who had had comparatively little sleep owing to her anxiety to accomplish her task, and whose health and nervous system had in consequence suffered considerably, was, just as she passed her final proofs for press, seized with a violent attack of intercostal pain. It was one of the worst cases that I have seen. It kept her awake at night, and it gave her no rest by day. Injections of morphia, which her doctor had employed, while lulling the pain for a short period, seemed, as she expressed it, to make it return each time even worse than before. There was no uterine disease in this case at all, but when I saw her I was struck with the distended condition of the abdomen, and found the rectum and the colon enormously loaded. It required large injections of olive oil and soap and water, and, next, repeated doses of castor-oil, before the colon could be cleared; and then the pain immediately disappeared. In this case, and in others of a similar nature, one is sometimes put off one's guard by the statement that there is no constipation, and by the fact that the rec-

* This patient rapidly improved under treatment, and the neuralgia quite disappeared in about three weeks.

tum appears to be quite empty. But, in women of sedentary habits, especially if over-busied with brain work, with the inevitable deterioration of the general health and physical strength from which such women suffer, it is by no means unusual to find the colon to contain hard, dry, black masses of fæces, which have evidently lodged therein and remained stationary, even although the intestine appears to have maintained, to some extent at least, its normal peristaltic action. And, in these cases, intercostal or abdominal neuralgia is of frequent occurrence, and nothing will cure this until repeated small doses of castor oil and repeated large enemas of soap and water have cleared the colon, which was supposed to have been previously empty, of hard, black scybalous masses. But this simple measure will often permanently remove most severe neuralgic pains which may have lasted, without relief, for days or weeks, and which may have been intensified, as one can easily understand, by morphia injections, or by the routine administration of antipyrin or nerve tonics. In fact, without going further into this matter today, I would ask you to remember this fresh illustration of a practical fact of the first importance, to which I have frequently called your attention, that the condition of the colon in women is very frequently the clue to some of the most obscure pains and to some of the most troublesome, but most common, complaints to which the sex is liable.—Bedford Fenwick, M.D., in *Hosp. Gaz.*

THE EARLY SIGNS OF LOCOMOTOR ATAXIA.—According to Professor Fournier, the first symptoms of locomotor ataxy may be classed as follows: (1) Sign of Westphal; (2) sign of Romberg; (3) the "stairs" sign; (4) crossing of the legs; (5) walking at the word of command; (6) standing on one leg.

(1) Westphal's sign is well known; it consists in the abolition of the patellar tendon reflex, and is present in two-thirds of the cases.

(2) Romberg's sign can be thus appreciated: The eye is an indirect regulator of motion; it helps to correct deviations in walking and maintains the equilibrium. When a patient is suspected of incipient ataxy, it will often suffice to make him close his eyes when in the erect position to verify the diagnosis. In a few instances his body will oscillate, and if the malady is somewhat advanced he will be in danger of falling.

(3) The "stairs" symptom. One of the first and most constant symptoms of incipient locomotor ataxy is the difficulty with which the patient will descend stairs. If questioned closely on the subject, he will say that at the very outset ol his malady he was always afraid of falling when coming down stairs.

(4) The manner in which a patient crosses his legs is often significant. In the normal state a man when performing that act lifts one leg simply to the height necessary to pass it over the other, whereas in the affection under consideration he lifts it much higher than necessary, describing a large segment of a circle.

(5) Walking at the word of command. The patient seated is told to get up and walk instantly. After rising he will hesitate, as if he wanted to find his equilibrium before starting off. If while in motion he is told to stop short, his body, obeying the impulsion, inclines forward as if about to salute, or, on the contrary, he jerks himself backward in order to resist the impulsion forward.

(6) The patient is asked to stand on one leg, at first with his eyes open, afterwards closed. Although man is not made for this position, yet he can balance himself pretty firmly for a little while. The ataxic will experience a great deal of difficulty, and will instinctively call to his aid his other foot so as not to fall. If his eyes are closed he will not be able to stand one instant, and if not held he would fall heavily to the ground. Such are the symptoms of incipient locomotor ataxy. They will not be all present frequently, but they should be all sought for in order to avoid an error which might have grave consequences.—*Practitioner.*

TREATMENT OF ACUTE INFANTILE ARTHRITIS OF THE HIP.—The treatment of acute artritis resolves itself into two things: (1) that directed against the general septicæmia; feeding and stimulating, including both alcohol and cardiac stimulants; and (2) the local treatment, rest, free incisions, disinfection, and drainage of any and all pus cavities. The acute general sepsis is generally present before it is possible to know that there is pus in the joint. At this stage, feeding at absolutely regular and proper intervals must be insisted on, the mother's milk being, of course, the best food for small babies. I have given brandy, ten drops every two hours, and one drop of tinct. digitalis in the alternate doses to babies as young as two months, after an operation; and there is every reason to push both the food and stimulants from the very beginning in these cases. The local treatment must include rest of the painful hip before as well as after the operation; the Cabot frame affords good fixation, and allows inspection of the limbs, which a plaster bandage does not do, although the latter method has been used, as also extension in bed on an inclined plane. The Cabot frame, if properly guarded with rubber tubing and rubber cloth or oiled silk, is also preferable after operation, on account of the frequent soaking of a plaster spica with urine. The limb should in the early days be put up in a comfortable position, usually semi-flexed. As soon as cellulitis or great tender-

ness in the tissues about the joint gives rise to a fair presumption that there is pus, a free incision should be made (preferably following one of the lines for excision of the hip) and the capsule opened; and should no pus be found, it does no harm to look for it by deep incisions into the cartilaginous epiphysis. If, however, large abscesses are found, the cavities, according to Gibney, should be carefully curetted and disinfected; and this should always be done unless the baby's condition is bad enough to make great haste necessary.

After reducing a dislocation of the hip, the leg should be dressed on a straight Cabot frame, or a long plaster, spica bandage may be applied. A moderate amount of extension is advisable, as it assists in keeping a baby's hip at rest.

Stimulants, I believe, are usually required, but no rule can be definitely laid down for their use. Every precaution should be taken during the operation to avoid shock.—Thorndike in *Boston Med. Jour.*

KEEP YOUR MOUTH SHUT.—Dr. A. W. Davis thus writes in *The Healthy Home:* "Four or five hundred years ago," says *Science Siftings*, "there was a superstition common to Europe that the devil was always lying in wait to enter a man's body and take possession of him. Satan generally went in by the mouth, but when he had waited a reasonable length of time and the man did not open his mouth, the devil made him yawn, and when his mouth was open jumped down his throat. So many cases of this kind occurred that the people learned to make the sign of the cross over their mouths whenever they yawned, in order to scare away the devil.

"The peasantry in Italy and Spain still adhere to this method, but most other people have dispensed with the cross sign, and keep out the devil by simply placing the hand before the lips. It is a remarkable survival of a practice after the significance has perished."

As we pass people in the street, watch them at their work in church, and in society, probably half of them have their mouths open. The old superstition was probably well grounded—the devil of ill-health is very likely to enter at the mouth. Particularly is this true when the season advances towards winter, and the difference between the outside air and the bodily temperature becomes steadily greater.

The sinuous nose passage, with its fringe of hair, is meant to warm and strain the air before it enters the sensitive lungs. No wonder the mouth-breathers are liable to colds and pneumonia, especially when they keep up the practice, as a rule, both day and night. In fact, many who are innocent during their waking hours are determined sinners against good taste and good health by defiantly opening the mouth in sleep. It is more than an annoyance to be a snorer; it is a serious misfortune.—*Ann. of Hyg.*

EFFECT OF THE LOCAL APPLICATION OF GUAIACOL IN THE REDUCTION OF THE TEMPERATURE IN TYPHOID FEVER.—Dr. H. G. McCormick (*Medical News*, Jan. 19, 1895), had it applied 273 times under his direction. The method was as follows: The right iliac region was thoroughly cleansed with soap and water, and, after being dried, the guaiacol was slowly dropped upon the part and thoroughly rubbed in for from ten to fifteen minutes. The part was then covered with oiled silk. The preparation used was that of Merck., and it did not fail in a single instance. He concludes: 1. That guaiacol when locally applied is certain to reduce temperature. 2. That with the care that a physician should always use in the administration of drugs, it is absolutely safe. 3. That chills will not occur if the temperature is not reduced below 100 degrees Fahr. 4. That no deleterious effect is produced upon any of the organs by its use. 5. That it is easy to apply, and can be used by any one competent to nurse a typhoid-fever case. 6. There are no depressing effects following an intelligent use of the drug. 7. That by continued use the dose can be gradually lessened. 8. That it is far superior to the cold bath; that it can be used by one person; that no appliances are necessary for its use; that it is much more pleasant for the patient; that it is fully as effective; that patients are not subjected to the danger of moving, and they offer no resistance to its use. He says he has obtained good results from baths and cold packs, but, after his experience with guaiacol, has no desire to return to either of them. A tabulated report of several cases, giving the temperature, pulse and respiration, as affected by the application, is given. The largest dose used was 25 drops; the smallest, 2 drops; dose was usually 10, 15, or 20 drops; the 20 drop dose appearing most frequently in the table.—*South. Cal. Prac.*

INTESTINAL ANTISEPSIS.—Dr. H. Huchard, of Paris, in a recent lecture recommended the administration of the following powders to secure intestinal antisepsis, *Med. Rec.*: R Benzonaphthol, ʒ vjss.; powdered charcoal, ʒ ss.; pancreatin, grs. lxxx. Mix and divide into fifty powders. Sig.: Take from four to six powders a day.

DID the Indiana preacher libel all womankind, or has his experience with Indiana women been such as to justify him in making the following assertion in a sermon? "God made the earth in six days, and then rested; then he made man, and rested again; then he made woman, and since that time neither God nor man has had a rest."—*Med. World.*

THE INTRA-NASAL USE OF COCAINE.

To the surgeons who are old enough to have had some experience in minor surgery previous to the use of cocaine as a local anæsthetic, some of the cases of cocaine poisoning frequently reported in medical journals must assume somewhat the character of the ludicrous. The author has been unfortunate enough to have observed all the symptoms of cocaine poisoning follow an operation in which cocaine had not been employed.

Certainly in his experience before the advent of of cocaine as a local anæsthetic, syncope sometimes followed the simple incision of a boil or an abscess or even vaccinating a patient; and in the case of a male or female, a hysteric, several hours sometimes elapsed before the heart-beat assumed its normal character, and days before the patients were willing to admit that they were as well as usual.

The absence of pain during an operation does not in all instances prevent syncope. Most fainters when questioned say that it was not pain, but rather thoughts about the operation or the sight of blood that caused the attack. Indeed, my personal experience would seem to indicate that syncope was equally liable to occur with or without local anæsthesia during a minor operation. and that the absence of pain would not always prevent surgical shock.

The hysterical element in this connection should receive due consideration. Prof. A. H Cleveland, of the Medico-Chirurgical College, who, like myself, has used cocaine anæsthetics extensively without having observed a single case of cocaine poisoning, informed me that the nearest approach to anything of the kind occurred in a hysterical woman who after the application of a solution of cocaine to her nasal mucous membrane suddenly became unconscious. Her pupils were widely dilated, her extremities cold, the heart's action rapid and feeble and respiration so shallow and slow that for a time she seemed to have ceased breathing entirely. In fact, the woman presented to an alarming degree for some length of time all the symptoms of acute cocaine poisoning and the case might have been reported as such were it not for the fact that at a subsequent date she was referred to a neurologist and developed identical symptoms during his examination. Precisely simliar symptoms also occurred whilst her eyes were being examined by an oculist.

It would seem the part of wisdom, before reporting a case of cocaine poisoning, to assure one's self hat the untoward symptoms were not *post hoc* rather than *propter hoc* cocaine, and could not more reasonably be ascribed to shock hysteria or a combination of the two, rather than cocaine idiosyncrasy. Of course in cases where a *poisonous* dose of the drug has been administered, there can be little doubt as to the cause of the symptoms of collapse, and some of the cases reported are undoubtedly of this character; and are valuable as a reminder to the reader that cocaine, like other poisonous drugs, should not be employed in poisonous doses.

Great individual susceptibility to cocaine must be somewhat rare, because as the result of inquiry among among men who as rhinologists, oculists or aurists almost daily use cocaine for purposes of diagnosis or operation, I find that the majority of them, like myself, never saw a case in which alarming symptoms had been caused by the judicious use of cocaine for either purpose. It should be borne in mind that the large venous sinuses underlying the thin mucous membrane of the nose, deep urethra and rectum absorb *weak* (2 per cent. to 4 per cent.) cocaine solutions almost as rapidly as if the drug were administered hypodermatically, and hence the minimum fatal dose is probably smaller if a weak solution be sprayed or injected into these organs than if the drug were given by the stomach. The surgeon who sprays the whole interior of the nose by means of a swab, will certainly see cases of cocaine poisoning if the whole amount so used exceeds the three-fourths of a grain for an adult. An equal amount of cocaine applied to the nose in a strong solution will be less likely to produce disagreeable constitutional symptoms because the absorption of solutions of cocaine through the nose, is to a certain degree a self-limited process. When a strong solution is applied, a small quantity is absorbed and produces an immediate contraction of the vessels, so that the mucous membrane becomes almost ensanguinated; after which absorption goes on very slowly, A weaker solution of cocaine produces contraction of the blood vessels more slowly, so that a larger amount of it is absorbed and penetrates the tissues to a greater depth. Hence the application of a dossil of absorbent cotton saturated with a twenty per cent. solution of cocaine within the nose, will produce a more rapid but less deep and profound local anæsthesia than when a four per cent. solution is used in a similar manner.

When applied to the nasal mucous membrane, a solution of cocaine not only produces local anæsthesia, but also diminishes the secretion of mucous, contracts the blood vessels and causes shrinking of the so-called erectile tissues. Therefore it has a therapeutic value in the treatment of nasal disease as well as a use in nasal surgery for purpose of diagnosis or local anæsthesia. In acute rhinitis the discharge and the occlusion the nasal chambers as the result of swelling of the erectile tissue is quickly relieved by placing within the anterior nares dossils of absorbent cotton saturated with a four per cent. solution of cocaine. After the removal of the pledgets of absorbent cotton, the effects of the cocaine application disappear within

an hour and are followed by a decided reaction; so that nasal stenosis and discharge are greater than if cocaine had not been used. Fortunately, however, if immediately after dilating the nasal fossæ in this manner with pledgets of cotton saturated with a cocaine solution, they are covered with the spray from an atomizer containing a four per cent. solution of antipyrine, diminution of discharge and potency of the nasal chambers will be maintained for five or six hours and the application of the cocaine will be followed by no reaction whatsoever. The effectiveness of the application of cocaine and antipyrine to the nasal chambers in acute rhinitis may be further increased by spraying the nasal fossæ with an atomizer containing menthol dissolved in alboline, five or ten grains to the ounce.

At first sight, it would seem desirable to combine the cocaine and antipyrine together in one prescription. As a matter of experience, however, this is not the case, as it is impossible to obtain as good results by spraying the nasal chambers with an atomizer containing both antipyrine and cocaine in solution, although the mixture has decided sedative properties. Unless guarded by cocaine, solutions of antipyrine stronger than one per cent. are decidedly irritating to an inflamed nasal mucous membrane and do not manifest the analgesic effect that they are capable of producing when applied to inflamed mucous membranes in other parts of the body.

In hay fever, cocaine is useful simply as a palliative, and unless its intra-nasal effects be continuously maintained by frequent applications, its employment increases rather than diminishes the patient's suffering because of the reaction that follows its use; while solutions of antipyrine used after cocaine as described above are frequently simply irritating.

In nasal hydrorrhœa, while applications of cocaine check the discharge for a time, spraying the nose at sufficiently frequent intervals with a weak solution of atropia yields far better results. Care must be taken, of course, that a poisonous dose of the drug is not administered in this manner.

The following facts should be borne in mind when cocaine is used within the nose:

1. Local anæsthesia is best and most safely obtained, not by spraying the entire Schneiderian mucous membrane with a solution of cocaine, but by applying the solution on absorbent cotton simply to the field of operation.

2. Within certain limits, weak solutions of cocaine produce deeper and more profound anæsthesia than the stronger, but require a longer time to manifest their full effects, a four per cent. solution being probably the most satisfactory strength for obtaining local anæsthesia within the nose.

3. Solutions of cocaine, when applied to inflamed mucous membranes, do not manifest their effects as quickly and completely as when no inflammation is present.

4. Unless the effects of cocaine are maintained for a considerable time by repeated applications of the drug, its use locally is followed by increased congestion and inflammation when inflammation is already present.

5. When cocaine is used to produce a sedative effect and diminish the discharge in acute rhinitis but more especially in hay fever and nasal hydrorrhœa, it should be employed in solution rather than as a "snuff" made from cocaine crystals powdered with other substances, because the mechanical irritation of a powder tends to increase the existing inflammation and discharge and to counteract to that extent the effects of the cocaine.

6. When a solution of cocaine is used within the nasal chambers, care should be exercised to prevent its reaching the pharynx, where it quickly suppresses the secretions and produces a most annoying sensation of dryness which the patient vainly tries to relieve by frequently swallowing saliva. Except as an application to the tonsils, cocaine is not well adapted for a therapeutic use within the pharynx.

7. When it is necessay to prescribe a solution for the patient to use himself within the nose, some precautions should be used to prevent him forming the cocaine habit. It is well not to inform him of the name and nature of the drug. The morphine habit has been acquired by frequently sniffing a solution of that drug into the nose for the relief of pain, catarrh, etc, and in such cases a solution of cocaine gives so much greater relief from the local symptoms and a great a feeling of buoyancy that the habit of applying cocaine solutions inside the nose is soon established and only with great difficulty abandoned.—E. B. Gleason, M. D., in *Atlantic Med. Week.*

Intestinal Anastomosis by Murphy's Button.—Wiggin (reprint from the *New York Med. Jour.*), in his comments on a complicated case of intestinal obstruction, points out that Murphy's button should be used by surgeons with a proper understanding of its dangers, which are held to be numerous. In the author's opinion, it is somewhat unsurgical. It has been proven by experience that the button may be retained in the intestine, act there as a foreign body, and necessitate a secondary laparotomy for its removal. Murphy's method renders the patient dependent on the craft of the cutter rather than upon the skill of the surgeon, the spring of the button being made at times too strong, and at other times too weak. It is not always possible for the surgeon to lay his hand on a button of the proper size. A case has been reported in which perforation followed the use of a button a little too large for the

portion of intestine united. There is a danger in the weight of the button which may act as an anchor to hold the bowel in a flexed position, and so cause obstruction. There is also a danger of the lumen of the button becoming plugged with hard fæcal matter, thereby causing fatal obstruction. The holes placed at the ends of the buttons for the purpose of drainage may cause perforation, if care be not taken in pressing the segments together. On the other hand, the statistics collected by Wiggin are much in favor of Murphy's method. In 84 cases of intestinal anastomoses of gastro-enterostomy and of operations on the gall bladder, the mortality was 14%, which compares favorably with that of intestinal anastomoses by other methods, which, according to von Baerez, is 24.5 per cent.—In a consideration of Wiggin's objections which is published in this reprint, Murphy states that of the numerous cases in which ais method has been practiced, not a single instance has been reported to him of obstruction due to retention of the button, and he has heard of only two in which the button had been retained. In this case on which Wiggin bases this special objection, the button, it is held, might have been removed by an operation which no surgeon would consider of grave importance. In answer to the objection that in practising Murphy's method the surgeon depends mainly on the craft of the cutter, it is pointed out that he depends also on the silk manufacturer for the silk he uses, and as he tests his silk, he should test also his button. Murphy has sent models to all manufacturers who have requested them, and asserts that he would gladly inspect, and does inspect all buttons sent to him. The fact that defective buttons have been manufactured cannot, he believes, be brought forward as a valid argument against the utility of his method.—*Brit. Med. Jour.*

THE STUDY OF HEREDITY.—In his address before the Abernethian Society, Sir James Paget drew attention to the great gaps which exist in our knowledge of the laws of heredity. Some of the broad facts of heredity are familiar enough, and are indeed too palpable to be overlooked even by careless observers. That gout, cancer, rheumatism, tuberculosis, and insanity, to take a few examples out of many, are often inherited is a well recognized and certain fact, but, says Sir Jas. Paget, "it has never been studied carefully what may be the result when one parent has one transmissible disease and another has another; what comes if one parent is a member of a cancerous family and another a member of a tuberculous family. Do these two diseases in any respect disturb one another? Are they mutually exclusive, or do they mingle together? We know that acute tuberculosis and acute cancer never make rapid progress together; they seem in so far as that to be antagonistic. But what comes of it when they are mingled together by inheritance? Of that I think we certainly know nothing." This is only a specimen of numerous questions which might be put in connection with the subject of heredity, but are for the present without any certain answer. Is heredity more usually through the male or the female? If a son or daughter strongly resembles the male or female parent, will he or she be likely to develop the diseases occurring in the corresponding stock? Why does disease sometimes "skip a generation" only to re-appear with increased virulence? Why does the epilepsy of the parent become insanity in the child, or *vice versa?* How comes it that the female transmits the tendency to hæmophilia, but is herself exempt, while the male who suffers does not usually propagate the disease? We might multiply these queries a hundredfold, but they are sufficient to show how much darkness still envelops so patent and all-important a fact as the inheritance of disease.

Some of the laws of heredity are approximately known, although often their *raison d'être* is inexplicable—as, for example, the law that disease often skips a whole generation and re-appears in the generation that follows. This fact has long been observed, and is known as "the law of atavism." It seems to involve the assumption that an individual apparently quite healthy may contain in his organism the seeds of disease, for example, tuberculosis or cancer, and transmit the tendency to such diseases to his offspring although he has never presented any symptom of them himself. This may be so, but if such a theory be correct it intensifies our conception of the mystery of pathological processes. If it could be shown in such cases that the "latent" seeds of disease (we are compelled to use figurative language in this connection for want of better) remain latent until certain favoring conditions combine to bring them to maturity, the mystery would be materially lessened, but in many cases we have no evidence that such is really the true explanation. It may, however, be regarded as often a probable hypothesis. . . . .

A great deal of work still remains to be done in connection with the heredity of phthisis. It is generally asserted that from thirty to forty per cent. of the cases arising in practice occur in infected families, but it is striking how various are the figures given by different observers. Owing to the great frequency of the disease and the probability of infection, it is evident that many cases of apparent inheritance might be otherwise explained. It would be a great gain to practical medicine if we had decisive evidence as to the influence of heredity upon phthisis on the one hand and the frequency of infection on the other. We are still without any quite satisfactory theory to harmonize the apparently certain facts that

pulmonary tuberculosis is due to a specific bacillus and that it is frequently transmitted by inheritance. Some French observers published a few years ago, evidence tending to show that the actual bacillus of tubercle was conveyed to the offspring through the ovum, but this view has not been generally accepted. Many believe it to be more probable that the patient transmits simply a constitutional delicacy or some peculiarity of the pulmonary tissue which renders the individual more liable to become the subject of bacilliary infection; but it can not be said that we have any certain information on the subject.—*London Lancet.*

AUTO-INFECTION FROM THE BOWEL.—The cause of the so-called spontaneous suppurations have always been a puzzle to medical men and it is only within the last decade that their origin appears to become more intelligible, although the knowledge of their production is still far from being exact. That a furnuncle, or any other inflammatory focus may be the starting point of an abcess far removed from the initial, and often insignificant, inflammation has been demonstrated by well-known observers, and it is plain that such a point of entrance of the infectious material is easily overlooked and often even impossible to determine as it may have escaped the patients' notice and entirely disappeared at the time of examination by a physician.

The present trend of investigation with reference to determining the cause of spontaneous suppurations seems to be based upon the supposition that the absorption of infective material from the bowel is the cause of many otherwise unexplainable metastatic inflammations and it is particularly the bacterium coli whose absorption into the circulation and dissemination throughout the tissues of the body is made responsible for these metastatic foci. The strumitis following typhoid fever and other intestinal affections was, years ago, suspected by Kocher and others to be due to an absorption of bacteria from the bowel, in fact, such bacteria have been demonstrated in the strumitis, and according to Brunner, this absorption of bacteria may even occur from the healthy bowel. It has been shown that bacteria may pass through the intestinal wall and infect the peritoneum when only slight pathological changes are present in the bowel and, in case of the presence of conditions favorable to the development of an inflammatory process, as, for instance, a blood-extravasation, a peritonitis may be the result. Ordinarily the peritoneum rapidly absorbs the bacteria, which are then carried by the circulation to all parts of the body. Well-known observers now claim that some forms of purulent nephritis, pyelitis and cystitis are to be explained by the absorption of bacteria from the bowel, while formerly all such suppurations were attributed to catheterization. Posner and Lewin have lately made experiments having a bearing upon this subject, by tying the rectum of rabbits, after which they were able to demonstrate the bacterium coli in the peritoneum, heart's blood, kidneys and urine. These observers have also succeeded in proving that the bacteria do not directly pass into the bladder and thence into the kidneys, by tying one ureter and showing that the bacterium coli was also found in the corresponding kidney after clamping the rectum. Also upon the injection of the bacillus prodigiosus, which had been selected for this purpose on account of its characteristic color production, this bacillus was found in all the organs of the body.

Although it must be admitted that there may be other sources of so-called spontaneous suppurations, the probability that some of them occur in consequence of the absorption of infectious material from the bowel is, with our present information on the subject, highly probable and many otherwise unexplainable cases of suppuration become comprehensible by this process.—Ed., *Med. Rev.*

INSOMNIA OF CHILDREN AND TRIONAL.—Dr. A. Claus reports his experiences with trional in the insomnia of children, in the *Internat. Klin. Rundschau*, Nov. 11, 1894.

In a case of chorea of three weeks' duration, occurring in a girl six years old, the movements were very lively, and the nights restless and disturbed by dreams. Fifteen grains of trional given ten minutes before sleeping-time secured quiet nights. This dose was continued for eight days, and then for three weeks longer in doses of $7\frac{1}{2}$ grains. In two less pronounced cases of chorea the same result was obtained.

Claus also reports a severe case of nocturnal terrors in which trional had a very favorable effect, and says he has had seven or eight similar cases. The child was two years old. Trional was given in doses of $7\frac{1}{2}$ grains. During the first four or five nights the effect of the trional was not entirely complete. After the sixth day the insomnia disappeared. The trional was continued in the same dose for three weeks, without injurious result. In the following four weeks, a powder of trional was required only twice.

In a case of epilepsy in a child eight years old, with obstinate insomnia, 15 grains of trional secured restful nights, but the epilepsy was not improved.

The writer does not think it necessary to speak of the value of trional in insomnia as the result of disturbance of digestion, respiration or circulation, nor in infectious or toxic insomnias. He has employed it in several cases of gastritis, in dentition and in two cases of insomnia following measles.

As to disagreeable effects, Claus noticed a certain degree of ataxia when ten grains of trional had been given to a child five years old, with

insomnia following broncho-pneumonia. In a case of abscess of the neck, in an infant six months old, 7½ grains produced excitement.

In three cases of incontinence of urine, no result was obtained, but a fourth case seemed to be favorably influenced. Trional should be given a half-hour after the evening meal, or, at latest, fifteen minutes before bedtime. It may be given in hot milk or in a confection, or in honey.

Claus's conclusions are as follows:

1. Trional, in the dose of ½ to 22 grains, according to the age of the child, is a brilliant hypnotic. On the following morning, neither headache nor heaviness of the head was noticed. Physiological sleep was favored. Patients do not become accustomed to it. Sleep occurred in ten or fifteen minutes after its administration.

2. Trional has no very pronounced effect upon insomnia, the result of pain.

3. Trional leaves the intellectual, respiratory and circulatory functions untouched, and it has a favorable effect upon digestion.

4. In toxic insomnia, particularly that caused by alcohol, chloral seems to be more active.—*Therap. Gazette.*

SALOPHEN IN RHEUMATIC AFFECTIONS.—It was Dr. Guttmann, of Berlin, who first called attention to the value of salophen in rheumatic affections, and during the three years which have elapsed since the publication of his observations, his experience has been confirmed by a large number of clinicians, both in Europe and in this country. In acute articular rheumatism, salophen has proved as efficient as salicylate of sodium and salol, while superior to them, on account of its complete freedom from toxic effects or irritating action on the gastro-intestinal tract. The other qualities which commend it to the practitioner are its tastelessness and odorlessness, and consequent ease of administration. In chronic rheumatic affections, salophen accomplishes as much as the salicylates, and is better adapted than the latter for continuous use, by reason of its innocuous, non-irritating character. The fermentative processes in the gastro-intestinal canal which occur in subjects having a rheumatic tendency are also promptly arrested by salophen, which is an excellent intestinal antiseptic. Drs. Ciullini and Viti, who have recently experimented with the remedy at Prof. Raimondi's Clinic, conclude: 1. That it is an active anti-rheumatic, better tolerated than salicylic acid and salicylate of sodium, and more innocuous than salol. 2. That it is especially indicated in the initial stages of acute articular rheumatism, and in mild or sub-acute cases. 3. That in obstinate or chronic cases it is advantageous to follow its administration with that of iodide of potassium. 4. That salophen acts as an antifermentative in the intestines and destroys the reaction of indican in the urine. 5. That doses as high as 4.0 to 6.0 gm. pro die, given for several days, do not produce disturbances of any kind. In the treatment of neuralgias, especially those of rheumatic origin, salophen has proved an effective analgesic, and, if desirable, may be associated with phenacetine.—*N. Y. Med. Times.*

HOW TO FIND OUT IF A CASE OF GONORRHŒA IS ACTUALLY CURED.—Dr. Kraft *(La Semaine Medicale*, No. 49, 1894), of Utrecht, Holland, has a very ingenious and at the same time efficacious method of testing whether in a given case of gonorrhœa an actual cure has been obtained. As is known, nothing is more difficult than to be able to say whether a gonorrhœa which has ceased to discharge has really and definitely been cured. The cessation of discharge, the absence of gleet and the agglutination of the lips of the meatus are easily absent while the disease is present, though latent, and still virulent enough to be transmitted by coitus. In such cases the absence of these signs may be the means of placing the physician in an embarrassing position. For example, a patient, who has had a gonorrhœa and is about to marry, asks his physician whether he is completely freed from his disease and without danger of contaminating his wife. In such cases the writer has the patient drink a quart and a-half of beer, while he injects into the patient's urethra a 2 per cent. solution of sublimate. If he is actually cured no reaction follows; if the contrary is true a discharge will be set up, which sometimes does not appear for forty-eight hours.—*Exchange.*

THE TREATMENT OF NEPHRITIS.—In a lecture reported in the *Medical News*, Dr Costa speaks on this subject. He thinks that the salts of strontium are valuable as diuretics in renal affections, and they are particularly valuable in the acute forms, but do less good in the chronic forms. They do not, according to the writer's experience, act so much upon the structure or tissues of the kidneys as upon its secreting function; they are admirable diuretics. The claim that has been made by some French clinicians that strontium salts markedly reduce the amount of albumin in the urine, has not been fully confirmed in the author's experience, except that the relative proportion of albumin is greatly reduced by the great increase in the quantity of the urine secreted. There is, however, some light diminution in the amount of albumin, as well as increase in the quantity of urine, especially in the acute forms. Whether in the parenchymatous and interstitial renal diseases these salts act beneficially upon the diseased or degenerated structures, or simply act as diuretics, has not been finally settled; but they certainly

accomplish more good in the acute than in the chronic forms of nephritis.

To return to our patient. In treating this case we need pay less attention to restricting the diet than in the other cases. This man may have meat and vegetables and a nourishing diet, avoiding indigestible and highly-seasoned articles of food. For his treatment now he shall take bichloride of mercury, $\frac{1}{30}$ grain, in a wineglassful of water three times a day, as a tonic to improve his tissues. This will be the treatment in this case, except that we will see, with the aid of the lactate of strontium, that the urinary secretion is kept free.—*Ther. Gazette.*

A Remedy for Whooping-Cough.—Dr. R. E. Hinman, Atlanta, Ga. (*N. Y. Med. Times*), reports twenty-eight cases. Thirteen cases in the Crittenden Home in all stages were placed in a closed room, and a 1 per cent. solution of formalin was sprayed from an ordinary hand bulb atomizer for ten minutes three times a day, the spray being thrown above the heads of the patients, saturating the air and inhaled by them. A marked improvement was noted in two days, and in two weeks all were well, and no new cases developed. Fifteen cases were treated afterward at the Inman Orphanage. Here the steam atomizer was used for twenty minutes three times a day in a closed room as before. The result was marked. Recent cases were cured within a week, and all in ten days. The attendant, a woman of 50, reported great relief from the spray, of a troublesome bronchitis of years' standing. In five cases of scarlatina its modifying influence was immediate and marked, one comfort to the patients being the absence of flies and mosquitoes from the apartment after its use.—*South. Cal. Prac.*

The Formation of an Artificial Anus.—Lauenstein (*Centralblatt für Chirurgie*) treated a patient suffering from obstruction of the bowel due to ovarian tumor. On cœliotomy, the tumor was found to be carcinomatous and extensively infiltrating, so that the ileum was compressed just before it passed into the colon. The ileum was divided above the stenosis between two rubber ligatures; the distal end was closed and dropped back into the belly cavity; the proximal end was separated from its mesentery for about seven inches, drawn out as far as possible, and secured at its base by a circular suture to the parietal peritoneum, thus leaving, as it were, a long spout projecting from the belly cavity. By removing the rubber ligature the contents of the gut were evacuated without any danger of soiling the peritoneal cavity.

Resection of the Entire Left Lobe of the Liver.—Prof. E. Tricomi reports the case of a man, aged 27, in which he extirpated the entire left lobe of the liver for adenoma originating in the bile ducts. After resection of the ensiform appendix, and division of the ligament. coronar. and triangular., as well as of the rectus, that portion of the viscus containing the tumor was drawn without the abdominal wound which was sutured. The neoplasm was compressed by means of elastic tubing and metal loop, and necrosis brought about. On the eighteenth day, after application of a segmented suture above the ligature, the tumor was separated with the knife; cicatrization occurred on the ninety-sixth day.—*Wien. Med. Presse.*

A most able and exhaustive paper opposing the "Anti-toxine" treatment of diphtheria has just been published by Dr. Hansemann, in a number of the *Berlin klin. Woch.*

His conclusions are:

1. There are no scientific, theoretical or experimental grounds for assuming that the so-called "diphtheria anti-toxine" is a specific remedy in diphtheria.

2. Proof of the specific action of the serum in man, has not as yet been obtained from practical experience.

3. Under certain conditions "anti-toxine" may act injuriously, for it exerts a disintegrating influence upon the blood, and produces serious changes in the kidneys.—*Post Graduate.*

The Danger of Anæsthetizing Diabetics.—Baxer calls attention to the danger of narcotizing diabetics. He has reported three of his own cases and nine collected from medical literature. Even in slight cases of diabetes the patients became comatose and died. Coma did not develop until the chloroform narcosis has passed off, in twenty-four to forty-eight hours. The patients then became indifferent, stupid and confused, finally lost consciousness, urine and feces were passed involuntarily, and they perished in coma. This communication is important, since it shows that the administration of chloroform is dangerous even when there is a slight degree of diabetes, it being impossible to predict whether or not coma will develop.—*Deut. Med. Woch.*

Extirpation of Voluminous Aneurism.—M. Quenu presented a man, æt. 36, on whom he operated a year ago for a voluminous aneurism of the external iliac artery on the right side, and a fortnight later for an inguinal aneurism on the left side; these two aneurisms were treated by the method of extirpation with complete success. The patient, a clown by profession, was able to resume his work in October last. The debut of these tumors dated two years back; the right was of the size of a child's head, and occupied the iliac

fossa and portion of the lower outlet. The left was smaller and situated across the Fallopian ligament. Collateral circulation was quickly established in both limbs, and no bad symptoms were observed, although the saphena vein on one side had to be sacrificed.—*Med. Press.*

CHRONIC RHINITIS.—In the remedial treatment, the following has proven of service, used with the atomizer twice or thrice daily. If used as a douche, dilute with two or three parts water. Note: The iodine is decolorized in preparation, a clear solution of light amber color resulting:

℞—Sodii boras, ... ℥ss.
Sodii bicarb, ... ℥i.
Aquæ puræ, ... ℥ii.
Dissolve and add
Acid carbol., ... grs. xv.
Tr. iodi, ... ℨiii.
Listerine, ... q.s. ft. ℨvi.—M.

ENURESIS NOCTURNA.—Dr. F. Clark, of Boston, Mass., writing, says: "I have used Sanmetto with good results in bladder, kidney and urinary troubles. I had a man come to me from Philadelphia, Penn., who had been troubled from an infant up to the age of 24 years with nocturnal incontinence of urine—wetting the bed almost every night. I used three bottles of sanmetto on him, and found it made a thorough cure. He can go to bed at 8 o'clock and sleep until 8 the next morning without urinating. I recommend with all honesty, to the suffering, and to the profession, the great cure—Sanmetto."

STRYCHNIA IN UTERINE HÆMORRHAGE.—Recently very extensive claims have been made for strychnine as a specific against all forms of uterine hæmorrhage. In gestation where there has been a previous history of flooding, it is advised to administer in one-sixtieth-grain doses three times daily for a period of from four to six weeks before expected labor. It is also declared to be of value where previous parturitions have been tardy owing to irregular and feeble uterine contractions.—*Med. Age.*

PLEURAL EFFUSION.—Dr. Cassarories (Roumania), has used and highly recommends the application of guaiacol in pleural effusions. He uses this combination:

℞.—Guaiacol, ... 3 grms.
Tr. iodini, ... 30 "
Glycerini, āā . . . . . 30 "

The antithermic action commences at the end of about four hours. The effusion is absorbed after some few daily applications, and does away with the dangers of thoracentesis. He was also successful in the anasarca, by using the application over the loins. The test for the purity of guaiacol is its perfect solubility in any proportion of glycerine. The crystalized guaiacol is to be preferred.—*Prog. Med.*

CATARRHAL AFFECTIONS.—An excellent cleansing and disinfecting solution for free use in the nasal cavities, by means of the spray apparatus, douche or syringe, is preparod as follows:

℞—Acidi boracici, ... ℥i.
Sodii boras, ... ℥i.
Sodii chloridi, ... ℥ss.
Listerine, ... ℨii.
Aquæ puræ, ... ℥vi.—M.

DYSMENORRHŒA.—

℞—Potass bromidi, ... gr. xv.
Ext. viburnii prunifolii, . . . ℥ ss.
Antipyrin, ... gr. xv.
Antifebrin, ... gr. j.
Spts. frumenti, ... ad. ℥ j.

M. Sig.—Every three, four or six hours, according to the severity of the pain.—*Post-Grad.*

USE OF ANTIPYRIN IN CYSTITIS.—Vigneron, *Ann. des Malad. des Org. Genito-Urin.*, has found that in many cases of cystitis no local treatment can be carried out on account of the intense pain produced by such manipulations. The author now injects a solution of antipyrin into the bladder, and continues with the local treatment. If the bladder be not dilated, ten to twenty grammes of a 4 per cent. solution of antipyrin should be injected into the bladder at least ten minutes before the local treatment is carried out. In dilated bladders the local treatment may be carried out first, and then from sixty to one hundred and twenty grammes of a ½ or a 1 per cent. solution of the drug may be injected into the bladder and allowed to remain.

THE TREATMENT OF DIPHTHERIC ANGINA BY SUBLIMATE.—Dr. Moizard, *Jour. Mde ed*,, recommends the use of sublimate in glyceria in the proportion of one to twenty or to thirty, which forms a syrupy, transparent liquid, which is not caustic. The affected parts are cleansed, the solution applied on cotton from which the excess of liquid has been removed, and the surrounding tissue being protected from the action of the solution by absorbent cotton held in forceps; this also prevents the swallowing of the solution. Of 261 cases treated, the proportion of cases cured varied rom 95 to 81 per cent.

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TORONTO, APRIL 1895.

Editorial.

CANADIAN COPYRIGHT.

There can be no doubt that all loyal Canadians will heartily sympathize with the persistent and laudable efforts of the Canadian Copyright Association to obtain from the Imperial Government what is manifestly our due in the matter of copyright.

The question has been argued *pro* and *con* by the officers of our Association on the one side, and authors and various civil servants in England on the other, with, as yet, no relief to either Canadian authors or publishers. It is held by the Canadian Government that they have the right, under the British North America Act of 1867, to legislate fully on copyright, and with that view the Canadian Copyright Act was passed unanimously in 1889 by our Parliament, was assented to by the Governor-General, but has not, as yet, been proclaimed by him, which last step is necessary before it shall become operative.

In England, the publishers and authors seem to dread that the home market and that of the United States would be flooded with cheap Canadian editions; but this dread seems idle, when the Acts of both these countries prohibit the importation and sale of unauthorized editions, and impose a heavy penalty for the violation of the law. As matters now stand, Canadians are sometimes *forced* to buy books from publishers in the United States, for it has happened that orders sent to London for books have been returned, marked "Cannot supply." This seems an intolerable hardship, but it is only one of many which the Canadian dealer has to suffer, and, in consequence, the Canadian reader.

The Canadian Act permits no "piracy," for should the author of a work neglect to secure copyright in Canada, no Canadian publisher could reprint the work in Canada without paying the author ten per cent. royalty. This is not the case in either Britain or the United States, where, if copyright be not secured, any publisher may reprint the work without paying the author.

We, in Canada, as a British colony are unfortunately placed side by side with a great country, with an immense reading population. Our Act is more favorable to authors, but owing to our smaller market, no authors consider Canadian copyrights as at all valuable, while things stand as they now do. Look at the facts:

To secure copyright in the United States, the British author must print his book there from type set within the limits of the United States, or from plates made from type set within the limits of the United States. The Canadian Act provides for no such restriction, but allows both British and United States authors to set the type in Canada, or print from plates, as they may think best. In anticipation of the Canadian Act coming into force, the Canadian Government passed a special enactment allowing plates for books to be imported into Canada free of duty. This concession was made thinking that it would be appreciated, but those opposing the Act seem determined to ignore the concession. Yet the concession is there, and it proves that Canada grants Britsh authors copyright on far more liberal terms than they can secure copyright in the United States; and that Canada grants United States authors copyright in Canada on far easier terms than Canadians are granted copyright in the United States.

Thus Canada has not only lost the printing of works by foreign authors, but is fast losing the printing of works by Canadian authors, *not because the books can be printed cheaper or better abroad, but because they have to be manufactured in the United States in order to secure copyright there.* When that is done, there is no necessity for issuing a Canadian edition, as the Canadian market can be supplied by the United States edition.

British authors are now able to secure copy-

right in the United States, and United States authors are now able to secure copyright in Great Britain (which covers Canada). Therefore the copyright owners now refuse to print in Canada. They supply this market with editions printed either in the United States or Great Britain. This is considered a great injury to the printing, paper and allied industries in Canada. It is, moreover, a source of trouble and annoyance to the people of Canada, as the British market is so far away that, after the supply on hand of a book is exhausted, some weeks must elapse before a new supply can be procured.

Recently a circular has been issued in England, containing objections to the Canadian Act. Space will not permit us to deal with the whole list, but the more important of them are that Canada has asked the British Government to sanction arrangements to take copyright in Canada away from all British authors except such as are Canadians. Such is not the case. Canada does not propose to take away copyright in Canada from British authors. The British author and the United States author may, under the Canadian Act, secure copyright in Canada on exactly the same terms as the Canadian author.

Also it is objected that the Canadian Act will injure the value of the British edition, because the Canadian edition could be imported into the United Kingdom and the other colonies, and compete with it. But from the report of Lord Knutsford's Copyright Commission of 1892, it appears that, at the instance of the British copyright owners, *the law of Great Britain was framed so that the importation of Canadian reprints of British works into Great Britain is prohibited.*

Most of the other objections are based on the supposition that the author loses control over his work under the Canadian Act. Nothing could be further from the fact, since, by complying with the terms of the Act, authors and copyright owners retain entire control of their works and may suppress old editions, or issue new ones as desired

As Canadians, interested in the development of our printing and kindred industries, we should all, and on every occasion endeavor to keep alive the sentiment that our Parliament has full and undoubted rights to enact legislation on copyright as necessary from time to time, just as it has power in all other subjects entrusted to it by the British North America Act of 1867.

DIABETES MELLITIS.

A very fertile field for the scientific investigator is to find the exact pathological conditions underlying the group of objective and subjective symptoms met with in diabetes mellitus. The morbid anatomy is most varied, and has caused much discussion. This disease has no peculiar lesion or series of lesions. It is not a distinct disorder in the usual sense of the term, that is, a disease having a common cause. It has no distinct characteristic symptomatalogy or pathology; and its principal clinical manifestation, viz., sugar in the urine, depends upon various morbid processes.

It is apparent that cause and effect have frequently been confounded; that at autopsies we are generally dealing with effects and not with causes.

Laboratory experiments have not enlightened us much as to the pathogenesis of the disease. The chemical theories advanced thus far have proved untenable. What lesions are found at post-mortems? Theoretically we expect to find changes in the fourth ventricle, but practically they are conspicuous by their absence. Various lesions are found in the brain, such as hæmorrhages, tubercular meningitis, etc., but they have no causal relation to the malady in question. Dr. William Mosher, of Brooklyn, in an excellent paper agrees that all these results or changes may be found at autopsies, but does not consider them causative. The lungs are frequently tuberculous, and at times œdematous. Hamilton and Sanders regard diabetic coma as dependent upon fat emboli in the pulmonary capillaries, with consequent slow carbonic-acid poisoning.

Of course this is theory. That fat embali do occur in some cases is beyond dispute. Frerichs ascribes the coma to acetonæmia. The kidneys, too, frequently show deep seated changes. The epithelial cells lining the looped tubes of Henle undergo glycogenic degeneration. The lesions in the liver are protean. In some cases the organ is found in a condition of passive hyperæmia, in others fatty, in still others slightly cirrhotic.

In short there is nothing from which to draw

any ætiological conclusions, as many have done. The liver cells, too, give the reaction with iodine. Dr. Mosher found nothing in the heart, spleen, or intestinal tract, of pathological interest. Most writers refer to the fatty condition of the blood in this disease. While this is not constant, it has been so great as to give the blood a milky appearance, so lipæmic that when placed in a glass, and left standing, a thick layer of fat formed on the surface. The presence of fat emboli in these cases is apparent. Is this lipæmic condition of the blood dependent on lesions or interference with the functions of the pancreas? That such is a fact in a certain number of cases, is apparent from the pancreatic changes found at autopsies.

"Facts bearing upon the relation of pancreatic disease upon diabetes have been accumulating since Cowley first discovered calculi in the pancreas of a diabetic, and Bright's pancreatic cancer in a similar case" (Tyson). In a case seen by Dr. Mosher in the Berlin Pathological Institute, an aneurism of the arteria pancreatica was found. Atrophy of the pancreas is not infrequent; hypertrophy and fatty degeneration of the gland cells are sometimes seen. It must be admitted, however, that these cases (atrophy, hypertrophy, and fatty degeneration) are not so clear as those mentioned above; that the factors which bring about these changes, as well as the pathology of those cases in which the organ remains unchanged, are problems yet to be solved.

WRONG TO A MANUFACTURING FIRM.

It is to be regretted that our contemporary, *The Toronto World*, allowed its columns to be used to the injury of the well-known and reliable firm of Parke, Davis & Co., of Walkerville. The statement was published that the above firm was seeking to introduce a low-grade alcohol into their Canadian laboratory for the manufacture of patent medicines. Following this was the statement, that the low grade alcohol was desired "for the manufacture of pharmaceutical preparations to be used for the making up of prescriptions."

The statements published in *The World* were mistakes, and that journal retracted them, on learning the true inwardness of the case. In justice to Parke, Davis & Co., it should be known to the profession that what they wanted was simply permission to introduce pure, standard, rectified spirits in bond, for the manufacture of pharmaceuticals, designed for export on a large scale to foreign countries. Such standard spirit can be imported in bond at the price of 25 cents per Imperial gallon. At present they are greatly hampered by the high market price of alcohol in the Dominion—$1.17 per Imperial gallon in bond; and to this must be added the excise duty of $1.50 per proof gallon. Their proposition to the excise authorities was cheerfully complied with, and will enable them to compete with European manufacturers in the markets of the world outside the Dominion; and will not involve in any degree the sacrifice of quality or potency in the finished preparations.

We believe that there is practically no such thing on the market as "low-grade alcohol,' unless this term be applied to dilute alcohol. Inasmuch as every manfacturer is perfectly free to purchase pure spirit (94%) and dilute it in accordance with the needs of the product manufactured., it would be absurd to talk of low-grade alcohol in this connection. The only other form of "low-grade alcohol," is a certain crude product supplied exclusively to establisments manufacturing vinegar under bond. The well-known "wood alcohol" could not possibly be used in the manufacture of pharmaceuticals, owing to its obnoxious odor.

Of course every physician knows that Parke, Davis & Co., do not manufacture patent medicines, and it is in justice to a firm doing a large volume of business in the Dominion, as well as carrying on a manufacturing establishment within our borders, that the above remarks are made.

THE BILL TO AMEND THE ONTARIO MEDICAL ACT.

We have before us the proposed Bill to amend our Ontario Act. No doubt our readers have been kept posted as to the main provisions of the Bill, by the public press. We have not time, as we go to press this morning, to do more than mention the utter absurdity of the proposed *amendments*. There seems to be no possibility, however remote, of this unspeakable attempt to

throw back medical education in Ontario half a century passing the Legislature; and it need only be mentioned to show how grotesque are the attempts of persons attempting to legislate on subjects of which they are utterly ignorant. If ever there was an utter fiasco in the matter of politics, surely the picture of our Ontario Patrons who were to have leavened the whole body of our legislators with a distinct portion of the yeast of honesty, shows such fiasco.

LETTER FROM HEIDELBERG.

One of the numerous interesting operations performed by Geheime Rat Czerny, in the Krankenhaus of the University this winter, merits, on account of its rarity, a short description.

The patient was one of those unfortunate individuals with violent persistent trigeminal neuralgia. He had been presented to the class previously by Prof. Erb. Several operations had been performed in other hospitals with but slight, or temporary, success. The affection was limited to the second and third division of the right nerve. Violent attacks of pain would come on every few minutes, accompanied by reflex spasms of the muscles of the face and vaso-motor disturbances—flushing and perspiration. The attacks would last one or two minutes, then a pause of five or ten minutes before a repetition occurred. During the night he suffered less, but still his sleep was very much disturbed. All the usual remedies having been proved useless in this case, he was given over to the care of the surgeons.

The man was brought into the operating theatre with the right half of his head shaved and placed on the table with head resting on a firm pillow. Chloroform was administered, during which the head was thoroughly cleansed and prepared for operation.

An incision was made, commencing just behind the external angular process of the frontal bone, upwards, backwards parallel with and a little below the parietal eminence, then curving downwards to a point just above the root of the ear, by which all the soft parts including the periosteum were divided. The flap thus formed was quickly separated from the bone for about half an inch along the whole extent of its border; all vessels caught and ligated with fine silk. A small circular saw one inch in diameter, attached to a dentist's drill, was now brought into use, and in a few minutes the bone corresponding to the incision was divided. The operator with chisel and mallet broke a few undivided portions of the inner table of the skull, the chisel being held at an angle of about 45° with the surface of bone. The whole osteoplastic flap was now pried up, the dura mater separated from its inner surface, and then forcibly turned outwards, breaking its base. The projecting spiculæ of bone were clipped off with bone forceps, the brain being retracted by an assistant. The dura mater was next carefully detached from the bone forming the middle fossa till the second and third branches of the 5th nerve were exposed. These branches were separated from their surroundings with some difficulty, owing to the confined space, and during the manœuvres the small meningeal artery, which enters the cranial cavity through the same foramen (ovale) that the third branch makes its exit, was divided. This caused some hæmorrhage, and it was fully half an hour before all oozing could be checked.

It was to me a surprise to see with what impunity they compressed the brain in order to enlarge the field of operation.

The two nerves were divided, the distal portions freed from their surroundings at the foramina of exit and each end of the severed nerves burnt with the thermo-cautery. The parts were then wiped out with gauze saturated with a weak antiseptic lotion. A small strip of iodoform gauze extending to the base of skull and emerging from the anterior end of skin incision was left for draining and the osteoplastic flap replaced, two other short pieces of the same gauze placed in the wound, one at the upper and the other at the posterior extremity, then interrupted silk sutures completed the operation. The knots of all the sutures were drawn to one side of the incision. A dressing consisting of strips of iodoform gauze, two inches wide, over the wound sterilized gauze, absorbent cotton and bandage was applied.

The patient made a good recovery. He complained of headache and some pain in the side of the face, but this soon passed off. The pain was evidently due to some irritation of the distal extremities of the stumps, as after an amputation. Strange to say there was very little

paralysis. This was probably due to new channels, for the nervous impulses having been formed after previous operations. A small area of anæsthesia remained at the upper part of the cheek. During the operation one could not help remarking the coolness with which Prof. Czerny took matters. He described each step as he proceeded, and on one or two occasions he joked with his assistants.

INGERSOLL OLMSTED, M.B.

Heidelberg, March 4th, 1895.

The following shows the growth of the assets of the Mutual Life Insurance Company during the past ten years:

Jan. 1st.	
1886	$108,908,967
1887	114,181,953
1888	118,806,651
1889	126,082,153
1890	136,40,1328
1891	147,154,961
1892	159,507,138
1893	175,084,157
1894	186,707,680
1895	204,638,783

The distribution of benefits to the Mutual Life Insurance Company of New York, in 1894, was wide and vast. The record of no other Company in the world can equal it. The payments on account of matured death claims, endowments, annuities, etc., amounts to $21,089,258.08. This represents the savings of many thousands of prudent people multiplied in the hands of the Company and repaid to the insured and their heirs. The average daily payments made by the Company during the last week of the year 1894, amounted to $64,486.17, or over $2,686.92 per hour for every hour of the twenty-four each day, and $44.78 per minute.

VARICOSE VEINS.—Ernst La Place, M.D., Philadelphia, *Med. Standard.* The author advocates the ligation of the long saphenous vein at the saphenous opening, and the short saphenous vein between the heads of the gastrocnemius as the best means of curing this condition. The œdema and blood stasis are overcome by elevation of the limb and gentle compresion with raw cotton, and flannel bandage. Rest in bed is absolutely necessary. Of the sixteen cases reported, six had the operation performed on both limbs in immediate succession, and in ten only one limb was operated upon. Five were females and eleven males. A four per cent. solution of cocaine was the only anæsthetic employed.

The advantages claimed for this method, therefore, are: (1) That it is applicable to all sorts of varicose veins. (2) The operation aseptically conducted is harmless, easy, and, under cocaine, painless. (3) It secures the result underlying the cure of all aneurismal and varicose states; obliteration of the affected vessel which results from blood coagulation, subsequent absorption of the coagulum, and fibrous tissue formation from leucocytes exuded, which contracts. (4) Relapses have as yet not been reported. (5) Recovery occurs in from two to three weeks.

ACNE ROSACEA.—Dr. Marr gives the following, *Med. World:*

℞—Liq. arsenicalis, ... ℥ iss.
Tinct. nucis vomicis, ... ℥ iij.
Tinct. ferri mur., ... ℥ v.
Tinct. gent. co., ... ℥ iij.
Pot. acetatis, ... ℥ vj.
Aquæ, ad. . . . . ℥ viij.—M.

Sig.—℥ij. t. i. d. p. c. ex aqua. Wash mouth after each dose.

Et.

℞—Zinci oxidi, ... , gr. 160.
Hydrarg. bichlor., ... gr. iv.
Vaselini, ad. . . . . ℥ ij.—M.

Sig.—Apply t. i. d. for first week.

Et.

℞—Ac. hydrocyan. dil., . . . ♏ xvj.
Bismuth. subnit., ... ℥ iss.
Zinci oxidi, ... ℥ j.
Vaselini, ad. . . . . ℥ ij.—M.

Sig.—Apply night and morning for second and third week.

OUR INCREASING NERVOUSNESS.—Professor Erb has delivered an address, *Phys. and Surgs.*, in which he states his view that there has been a clear loss of tone in the nerves of the highly civilized nations. This disorder is something more than hypochondriasis or hysteria, and is marked

by increased sensitiveness, weariness, lack of power of endurance, and defective recuperative power. The later development of neurasthenia, however, is not more symptomatic than was the hysteria of a past generarion. The race has survived one and probably will the other. Increased insanity and nervous disorder is not a necessary correlation of an increasing complexity of society. Better regulation of life will ensue, and by experience of what is inimical, to sustained life, we shall probably before it is too late, learn what is needful to conserve it.

PLASMA TABLETS.—Dr. M. McFarlane of this city has compounded a tablet, which we understand is to be put on the market by Parke, Davis & Co. It will be noticed that the composition is as nearly as possible identical with that of blood plasma.

The following is the formula for plasma nasal tablets (Murray McFarlane):

℞—Sod. chlorid.,	gr. 5.250
Sod. sulph.,	gr. 1.340.
Sod. phosphat.,	gr. .860.
Pot. chlorid.,	gr. .950.
Pot. sulph.,	gr. .480.
Pot. phosph.,	gr. .360.
Menthol,	gr. 1-15.

1 in ℥ij. of water.

IPECAC AS AN OXYTOCIC.—A writer in the *Br. Med. Jour.* says: In the course of general practice extending over many years I invariably carried a bottle of wine of ipecac in my midwifery bag, and rarely, if ever, gave a dose of ergot in the first stage of labor. Time after time on coming to a confinement case where the pains had been feeble and inefficient, or had totally ceased, two or three ten or fifteen-minim doses of the wine at intervals of ten minutes, have been followed in a surprisingly short time by energetic uterine action, with a rapid termination of the labor. It never produces the quasi-tetanic contraction so often met with as the result of ergot, the pains continuing to recur regularly, just as they do in natural labor, but with greater force and at shorter intervals.

DANGERS OF INTERNAL ANTISEPTIC MEDICATION.—P. Dignat, *Journal de Médecin de Paris*, in a timely article, writes of the dangers accruing from the internal administration of antiseptic remedies. He describes in detail two cases in which the ingestion, respectively, of salol and guaiacol, in comparatively feeble doses, produced a series of untoward symptoms. After careful observation and study, these symptoms could only be ascribed to the action of the remedies alluded to. The author believes that antiseptic internal medication renders good service, but insists that the fact that such medication is apt to do more harm than good in many instances, should not be lost sight of in modern therapeutics.

THROAT.—The correctness of the position taken by Professor J. Solis-Cohen, Sir Morell Mackenzie and other authors, as to the existence of membranous sore throat not diphtheric in character, has come to be universally admitted, and the claims advanced for certain methods of treatment in diphtheria proved to be based upon erroneous diagnosis, *Phila. Polyclin.* A recent illustration of this fact has come under notice at the Laboratory of Bacteriology, where cultures from three cases of membranous sore throat, much resembling diphtheria in appearance, in two of which there was high fever accompanied with constitutional depression, proved to be free from Klebs-Loeffler bacilli.

THE SONG OF THE GIRDNER TELEPHONE BULLET PROBE.—S. Morris Conant, in the *Medical Record*, perpetrates the following:

"After the 'shootin's' over,
After the scrap is done,
After the 'Dago's' punctured,
After the Cowboy's fun (?)
Many's the gun 'not loaded,'
I can attend to all;
Merrily I will meander
After the Ball."

COLOGNE TIPPLING.—According to *L'Union Médicale* this habit is increasing. Alcoholics, especially women, begin by taking a few drops of *eau de cologne* and finally drink it by the glass. The writer seems to think this form of alcoholism may replace or cure the cocaine and morphine habits. The habit is exceedingly injurious, for in addition to the poorly rectified alcohols, are the natural or artificial essential oils which are equally toxic. The practice is found among the upper classes principally.

TREATMENT OF PRURITUS ANI. — Dr. A. Berger states, *Internat. Jour. of Surg.*, that the following method immediately relieves the itching and causes a rapid disappearance of the eczema of the perineum and scrotum which frequently exists in these cases: A cotton pledget 2 or 3 cm. ($\frac{3}{4}$ to $1\frac{1}{4}$ inches) in length and steeped in a 2 per cent. solution of hydrochlorate of lime is introduced into the anus. This pledget is allowed to remain until there is a slightly smarting sensation, when it is immediately withdrawn and the anal region washed with the same solution, taking care not to wipe it off afterward.

AT this season of the year, when radical and sudden thermal changes are the rule, it becomes of vital interest to the busy practitioner to have in compact, ready form, such approved medicaments as meet the analgesic and antithermic requirements of the bulk of his patients. As pertinent we call attention to the following combination tablets: "Antikamnia and Codeine," each containing $4\frac{3}{4}$ gr. antikamnia and $\frac{1}{4}$ gr. codeine, "Antikamnia and Quinine," each containing $2\frac{1}{2}$ gr. antikamnia and $2\frac{1}{2}$ gr. quinine, "Antikamnia and Salol," each containing $2\frac{1}{2}$ gr. antikamnia and $2\frac{1}{2}$ gr. salol, and "Antikamnia, Quinine and Salol," each containing 2 gr. antikamnia, 2 gr. quinine and 1 gr. salol. These, together with the well-known "Antikamnia Tablets," of varied sizes, and "Antikamnia Powdered," constitute indispensable factors in the armamentarium of the physician, and are more than ordinarily indicated in present climatic conditions.

HINTS FOR PRACTITIONERS.—The following "tips" are suggested by Dr. Cocksedge of Wales, in the *Medical Record*: If you have a fatiguingly deaf patient to talk to, place the ear-pieces of your binaural stethoscope in the patient's ears, and talk into the chest-piece, and you have an excellent ear-trumpet. If you leave your spectacles at home, being old and presbyopic, make a hole with a pin in the corner of your visiting card, and you can read your clinical thermometer or anything else.

DIGITALIS IN GOITRE.—The most efficacious medical treatment of goitre consists in the internal administration of digitalis and the local application of an iodide ointment. *Med. Week.* The goitre diminishes in size, and even disappears, with astonishing rapidity. The favorable action of digitalis in hypertrophy of the thyroid is explainable by its influence on arterial tension; but this employment of the drug is not new, as it originated with Doctor Murray in 1776.

CARCINOMA.—There is no more important and sure sign of cancer than the adhesion of the skin over it; with the exception of tuberculous abscess there is no swelling in the breast that causes this early adhesion or dimpling of the skin. It may be a very early sign. It has been found well-marked over a small deep nodule, noted only five days before, and so freely movable that it could hardly be held steady to cut into it before removing the breast.

ASAFŒTIDA FOR INSOMNIA.—A five-grain pill of asafœtida, exhibited after supper and repeated at bed-time, will often bring refreshing sleep. *Louisville Med. Monthly.* In mild delirium, and especially during the period of unrest that precedes an attack of delirium tremens, the injection, by rectum, of two ounces of mixture of assafœtida will, in many cases, produce the much-needed sleep, without recourse to the more dangerous narcotics.

A USEFUL THING TO KNOW.—To restore hardened rubber goods, all that is necessary is to soak them in a mixture of one part of ammonia with two parts of water. This does not injure the rubber in any way, and restores the elasticity. Usually, soaking from ten minutes to half an hour is quite sufficient. After drying, the whiteness may be restored by dusting well with chalk or kaolin.

AN ANTISEPTIC TOOTH-POWDER, as recommended by Le Gendre, is composed as follows:

℞—Finely-powdered boric acid, . .	40 grs.
Chlorate of potassium, . . .	32 grs.
Powder of guaiac, ...	24 grs.
Prepared chalk, ...	64 grs.
Powdered carbonate of magnesium,	64 gas.
Essence of rose or mint, . . .	1 drop.

STRYCHNIA IN OBSTETRICAL PRACTICE.—Duff, *Jour. of the Am. Med. Assoc.*, advises the use of strychnia in doses of one-sixtieth to one-thirtieth of a grain three times daily during the latter part of pregnancy, and believes by following this prac-

tice that the indications for instrumental delivery are less frequent, and ergot will only occasionally be called for during or after the third stage of labor. He does not offer this as a routine treatment, but as indicated in a large number of cases.

TO MAKE STEEL INSTRUMENTS AS BRIGHT AS NEW.—Clean by rubbing with wood ashes and soft water, *N. Y. Med. Times.* Then soak in a weak solution of hydrochloric acid in water (about ten to fifteen drops to the fluid ounce) for a few hours, to remove the remaining rust and grease. Wash well in pure soft water, and place in a bath consisting of a *saturated* solution of tin chloride, letting them remain there ten to twenty-four hours, according to the coating desired. When removed from the bath, wash clean in pure water, and dry well. When the job is well done, the steel will appear as if nickle plated.

NEW TREATMENT FOR NASAL HÆMORRHAGE.—Trichloracetic acid in strength of three per cent. solution is applied to the nasal septum, *Rev. de Thérap.* It is advisable to add some drops of a solution of cocaine, 1 to 20 to mitigate the burning sensation caused by the acid.

PROF. DE SCHWEINITZ, in cases of corneal ulcer, says, *Ibid*, to always search for the presence of a foreign body.

Books and Pamphlets.

A TEXT BOOK OF HUMAN ANATOMY, SYSTEMATIC AND TOPOGRAPHICAL; including the Embryology, Histology and Morphology of man, with special reference to the requirements of practical surgery and medicine, by Alexander Macalister, M.A., M.D., F.K.S., F.S.A., Professor of Anatomy in the University of Cambridge. 816 illustrations. Philadelphia: P. Blakiston, Son. & Co. Toronto: Carveth & Co.

This work which is so well and favorably known in the old country is one of great merit. It is a comprehensive account of the anatomy of man, studied from a morphological standpoint. The author's long experience as a teacher gives him the facility of arranging and presenting his matter in a most attractive form, so far as that can be done with a subject which deals essentially with facts, as does anatomy.

He gives first a brief sketch of the evolution of form; then a short account of the nature and arrangements of the tissues. The remainder of the work takes the order in which the body should be dissected by the student.

The book is profusely illustrated, and we think it worthy of careful study, not only by students but by practitioners of surgery and medicine.

THE PHYSICIANS' VADE MECUM; being a Handbook of Medical and Surgical reference, with other useful information and tables. By Sebastian J. Wimmer, M.D., with additions by Frank S. Parsons, M.D. Philadelphia: The Medical Publishing Co. Toronto: Carveth & Co. $1.

The work is a useful compilation of recorded points of interest. It is up to date and will be found a handy companion for the student and young practitioner.

RELATIONS OF DISEASES OF THE EYE TO GENERAL DISEASES. By Max Knies, Professor Extraordinary at the University of Freiburg. Forming a Supplementary Volume to every Manual and Text-book of Practical Medicine and Opthalmology. Edited by Henry D. Noyes, A.M., M.D., Professor of Ophthalmology and Otology in Bellevue Hospital Medical College, etc. Octavo, 470 pages, illustrated, extra muslin, price, $4.25.

This work tells us in a clear concise manner how diseases of the eye often possess important significance in relation to the diagnosis and correct understanding of diseases of other organs. As the author explains in his preface, his aim has been "in the first place to speak of diseases from a general stand-point, setting forth, in separate sections, their common and familiar features, and in the second place, not merely to catalogue a more or less numerous array of dry facts, but to learn their meaning in the broadest and most complete sense."

"Throughout the book the alliance between the eye and the rest of the body are so admirably traced that it will be hard to decide upon whom the larger debt of obligation to the painstaking author will rest, whether upon the general physician or upon the ophthalmologist."

The book is really a cross-index between the general field of medicine and the specialty, ophthalmology.

THE CANADA LANCET,

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

Original Communications.

A FEW NOTES ON CEREBRO-SPINAL PATHOLOGY.*

BY DR. DANIEL CLARK,

Medical Superintendent of the Hospital for the Insane, Toronto.

The advancement of practical medical knowledge may not be very striking from year to year, yet, experience teaches that apparently insignificant facts may be followed by momentous results. The observations and experiments of Galen over seventeen centuries ago, on the recurrent laryngeal nerves and on the functions of arteries, led to the great discoveries of nerve function and blood circulation. The investigations in respect to the work of the lymphatics made in the seventeenth century, led to our present knowledge of their important place in the animal economy. Bell's researches into nerve structure and function, made nearly ninety years ago, were a great stride forward towards the better understanding of the workings of the cerebro-spinal economy. Magendie used Bell's data, and by adding them to his own observations, based on experiment, he came a step farther into the light of truth. Little did Tyndall dream that when he was experimenting with a sunbeam which straggled into his study, he was gathering material to prove the germ theory, and in *Listerism* to revolutionize the practice of surgery. Thus it always has been and always will be—one lays the foundation and another builds on it. One isolated fact may be a key to open a door into a veritable chamber of wonders. It is never to be forgotten, however, that theory is always to be received with caution, but experimental knowledge carries its own evidence with it. In this lies the great advantage of pathological research. Diseased organs with the signs and symptoms consequent thereon, have been studied closely during the past half of a century, with all the assistance chemistry, the microscope and micro-photography could give to the pathologist, nor have the observers labored in vain in this marvelous field of inquiry.

In 1840, Nasse discovered that after the division of a nerve, not only was the cicatrix after healing a different texture from that of the nerve divided, but that all the nerve from the cut part to its utmost extremity had changed in character. Atrophy, degenerated myeline, fibres changed in opacity and outline were always found to be the result of division in all the cut-off nerves. Ten years later, Waller not only corroborated this, but took a step farther and showed by actual experiment that not only did this change take place, but that regeneration to the normal condition never supervened. This was a great step towards a proper study of nerve decay, and especially of insanity in relation to permanent recuperation. A breach of continuity once effected in nerve tissue, either by disease or traumatic lesion, means irreparable loss of natural structure, and as a consequence loss in some degree of normal tone and function. We know that inflammation never leaves a structure as it found it. The interosseous substance of a fracture is always different from the normal bone. A scar is a good example of change of structure, and which always remains in this condition, having assumed a physiological habit in its abnormality. It is evident then that degeneration takes the direction of the functional activity of nerve fibres. These grand facts, springing from the study of a nerve cicatrix to a nerve—then from a nerve to the spinal cord—then from the cord to the medulla oblongata and white brain substance, have given us an insight into conditions the microscope could not divulge alone. These morbid changes show, on the one hand, the close intimacy of all nerve fibres; and on the other, the radical distinction of nerve tracts. Nerve fibres seem to lie alongside of one another like insulated electric wires, yet quite distinct from one another in function, until some point of *consensus* is reached in a nerve centre.

It will be seen also that a good deal of attention has been given lately to the connection nerve influence has with nutrition. It is asserted that certain parts of nerve centres have more peculiarly the functions of ennervating actions, which convey distinctive energies to focal points of assimi-

*Read before the Trinity Alumni Association, Toronto, March, 1895.

lation. It is evident from recent examination that there exist these so-called "trophic centres." These spots of peculiar nerve movement and influence are rich with the multipolar ganglionic cells. Our anatomical knowledge teaches us that these regions thus endowed are in the fourth layer of the cerebral cortex, in the anterior cornua and in the posterior columns of the spinal cord. Prolongations from the minute cells also affect nutrition. This great fact is strikingly illustrated in irritation of the fifth nerve. It is followed by skin eruption, ulceration of the cornua and inflammation of the eye. In paraplegia with wasting of the muscles, we find its cause where the multipolar cells most abound, in the anterior cornea of the spinal cord. Progressive muscular atrophy has the same record, and an analogous condition, exists in posterior spinal sclerosis. We know how these states, consequent on impaired nutrition bring about abnormal conditions of the joints—such as fractures consequent on want of appropriation of animal matter to give the bones elasticity, and even dislocations from want of tone in the tissues surrounding the joints. Those who have charge of the insane need not be told how the least pressure or blow will produce ecchymosis, and a slight force will be followed by fracture of bone in those having brain diseases. Metastasis of so many ailments is, no doubt, due to changes following mal-nutrition, and the cause of these degenerations is in depreciated nerve supply from these great centres of influence. The initiatory diseased impulses are given from these centres, but must, however, be always distinguished from those produced by abnormal conditions of the periphery of the nerve apparatus, and followed by vascular changes consequent thereon. Such as the latter are brought about by vaso-motor irritation, and differ materially from the conditions of the "trophic centres" as causes of diseases from diminished nutrition. For example, such a disease as Addison's is only a result of trophic disorder of the sympathetic and ganglionic centres. The nervous condition always antedates the pathological changes in the supra-renal capsules. In other words, the difference lies in centric and eccentric causes.

Of late years the special nerve activities have been closely investigated. Many diseases which were formerly supposed to be entirely due to malign blood effects are now relegated to a class of morbid processes due to nerve depreciation. In all diseases affecting nutrition of organs, or in even physiological localities, where are found perverted functions, one or more of these nerve structures are found to be abnormally deficient in multipolar ganglionic cells, or they are curtailed in size, shape changed, or polar appendices shortened. In paraplegia, with wasting of the muscles, post-mortems show degeneration and paucity of the multipolar cells in the anterior cornua of the spinal cord. Progressive muscular atrophy has the same record and an analogous condition exists in posterior spinal schlerosis. In all forms of polyuria brain changes are found, but more particularly in the semilunar ganglia of the sympathetic. The co-existence of exophthalmic goitre in kidney complications points to morbid changes in the nerve system of organic life, with one common origin, but with different manifestations. Recent experiments show that centres of nutrition are located largely in the spine and spinal ganglia. The morbific influence of impaired nutrition consequent on diseased nerve tracts is much more extensive than was formerly supposed. We see it in diseased conditions, in which are sudden metastases (such as exist in joints); also in deficiency of animal matter in bone; in want of tone in the surrounding tissues of joints, and consequently facility of luxation in articulating surfaces; easily produced ecchymosis in the insane, because of low vitality, and in atrophies of organs without antecedent inflammatory processes. In simple atrophy (not the degenerative form); in chronic arthritis; in local paresis, we often find no initiatory inflammatory symptoms, but simply a wasting of certain structures from want of capacity to assimilate building up material. It is true we often find inflammation or traumatic injury in the vicinity of these depreciating processes, but in these we can trace no direct connection between the two diverse conditions. It is evident the active state in a distant part has affected the nutritive nerve centres, and indirectly the influence of normal trophic supply is found wanting.

In one class the centric disease is primary, and in the other peripheral in its origin. These conditions are often seen paralysis following apoplexy. In a few days after the attack we frequently see an invasion of bedsores consequent on low vitality.

Slight pressure on the skin may be followed by bullæ and even eschars. These come on too suddenly after the central organ has been affected, to allow us to infer that surface causes produce them in the ordinary way.

It is not to be forgotten that morbid processes, wherever found, are, in essence, identical, even when existing in different structures. Inflammation, tumor growth, degeneration and hypertrophy are governed in their conditions of existence by general laws. These morbid states depend on the possibilities in the nerve influence and blood supply. This statement of a general law is also true wherever breaches of continuity exist. The situation or condition of a wound, an abscess, a cancer, or a fracture, may be varied, but this does not change the individual character of each, nor the distinctive vital processes involved in their pathological existence. The healing methods are the same in a cut, in nerve injury, in cicatrizing an abscess or in knitting together the ends of broken bones. Local circumstances may and do modify the character of the new structures, but the life work in building up any or all of our physical organization is uniform. The selective power to give individuality to structure is one thing and the general law of repair is quite another. The knowledge of this fact of generalization is tending to change our practice of medicine, our specifics are gradually being replaced by those therapeutic agents which supply merely material to the system. Nature is not dictated to in its heroic efforts to repair damages in the citadel of life, as it was heretofore in the empirical age of medicine. Pathology has done much for us in this direction. We virtually say to the master builders, we will supply constructive material in the shape of fresh air, sanitary surroundings, nutritious food, phosphorized pabulum and moral treatment, but you are expected to build up the waste places and to give tone to flagging energies.

It is not clearly decided where the trophic centres are situated, but it is evident in all forms of nutritive degeneration, that destructive changes take place in the multipolar cells, and often the axis cylinder is changed into merely shrunken tissue. This cell change and obliteration are more particularly seen in the front layer of the brain cortex and in the anterior cornua of the cord. There are yet undiscovered trophic localities in the nerve masses, as there is no evidence that either the motor or sensory nerves have the functions of trophic stimulation. This misdirected force brings about mal-nutrition in many forms. Atheromatous and calcareous degenerations, general as well as local, give undoubted evidence of its malign influence. We know how emotional shock, worry, or mental depression effect the functions of organic life, in such organs as the stomach, kidneys and the heart. These derangements are brought about through nerve influence, it being the principal factor in inducing depraved nutrition. Many of our hydra-headed forms of dyspepsia are primarily caused by nerve derangement. We now know that the morbid processes of Bright's disease are due to structural changes in the abdominal ganglia of the sympathetic. In other words, albuminuria is, in its origin, a ganglionic disease (Da Costa). Keen observers are, however, often led away by the fallacy of drawing general conclusions from special cases or specific lesions. They fail in not grouping together a sufficient number of uniform cases to enable them to safely gen eralize. A great deal of the false theorizing arises from the jumping at conclusions without sufficient data upon which to base a medical doctrine. We need not go beyond the numerous theorizers of to-day to prove how readily novelties are dragged into a medical creed, and then the hobbyist searches for all apparent proofs to fortify his views. Such ignore the logical rule, that it requires not isolated incidents, but groups of indubitable facts to uphold a theory or to establish a medical formula. The medical literature of the last half century shows that all kinds of doctrines were propounded, which there were few pathological facts to stand on. This tendency is to-day giving place to synthetical methods, and our increased facilities to trace the foot-prints of disease into its furthermost recesses, have led us to see generic relationships not heretofore dreamed of Before these discoveries we were looking at results, and were classifying them as diseases, when the causes were overlooked, because they were beyond our ken. We were examining the branches and giving them classical names to find out afterwards that they had a common trunk and were of a common origin. This may be illustrated in many ways. For example, we now find that many diseases are results of nutritive disorder of the

sympathetic or spinal centres. A number of this class of diseases are often concomitant with phthisis, pneumonia, ulceration of the bowels, and degenerated kidneys. The sudden invasion of diabetic coma: the chemical and organic changes found in acetonæmia; the morbid processes superinducing structural changes in Bright's disease; atheromatous and calcareous degenerations, and numberless other morbid changes and conditions, are now known to have their primary impulses in one or other form of mal-nutrition consequent upon nerve degeneration. It is not improbable that spasmodic dysmenorrhœa, visceral neuroses, some nervous forms of dyspepsia, certain *so-called* functional diseases of the heart, angina pectoris, and the various neuralgias, have the same origin. In a large number of such diseases are found destructive changes in the multipolar cells, and in the same central regions are seen the axis cylinders very much attenuated, to merely shrunken tissue. In many such cases, these otherwise active and necessary structures are changed so as not to be recognizable. A large number of heart symptoms, such as pulse intermittency, spasms, dyspnœa, or palpitation are now known to be neurosal in their origin, either through the vagus, the cardiac ganglia, or remote conditions of the sympathetic.

In this connection it is very striking to notice how the constituents of urine are determined by nerve conditions. The diabetes consequent on lesions of the organs in the base of the brain, or on some lesion of the sympathetic system, are evidences of this, and it is possible we might add to this category diabetes, due to defect in the so-called chemical changes of the blood. It is my opinion that albuminuria is only a symptom of many diseases and not a distinct malady in itself. It may be classed among the neuroses. We can even produce a change in the constituents or a superabundance of urine by diet without any disease existing, through the same influence.

We have a striking example of nerve influence in the kidney production seen in puerperal mania. Reference is not made here to that form of it superinduced by septicæmic poisoning from a disintegrating uterus, but to mania eccentrically produced from the impression made on the cerebro-spinal system through the great sympathetic. In the latter type there are found in the urine abnormal quantities of albumen. This is most noticeable if convulsions should be present, and followed by any form of paralysis or sense perversion. As far as known its existence antedates the apparent physical results. The sudden appearance and disappearance of albuminuria is as strange a feature of kidney energy as are the abrupt invasion and departure of puerperal insanity itself, as seen in so many cases. Not only so, but in intermittent forms, the mental exaltation and this kidney elimination are co-existent, showing their interdependence from a common nerve influence. It is possible that the conditions favorable to the production of albumen may be found simply in the decomposition of normal elements in the blood-producing glands. As a rule, the more albumen there is in the urine the less urea and uric acid are to be found. There is either a check to the formation of these normal substances by the generation of albumen, or they are retained in the circulation as toxic agents, or contribute to the formation of albumen. It may be that on account of their liability to decompose and form new organic compounds, they may primarily produce disastrous results in the blood, and in a secondary way on the glandular system. The most common change of urea is into carbonate of ammonia, or into some other equally deleterious body with an alkaline reaction. We know the toxic effects of many vegetable alkaloids, so it is probable an analogous effect may be produced on the nervous system by an isomeric product of the animal economy. At any rate this hypothesis would explain in such cases the sudden production of mania, of convulsions or recovery, or equally sudden death. As a matter of fact, organic alkaloids are found in the blood of puerperal females, but their chemical grouping has not been determined. We have found that blood possessed of these unnamed alkaloids is usually—if not always—deficient in hæmacytes and hæmaglobin. It will thus be seen that specific diseases of individual organs can be traced to neurotic derangements. This is strikingly seen in skin conditions following some spinal diseases. The association of special lesions in the spinal cord so uniformly co-existent with degeneration of muscles, nerves and joints, is being closely investigated. From the condition of sections of the cord many of these diseases can be inferred. Cell change is followed by perverted function, or it may be permaentn

disease. This is seen in muscular atrophy—diffuse myelitis and anterior polio-myelitis. Sometimes these causes of degeneration commence in the cord, and from it initiatory abnormal changes can be traced, but on the other hand the first evidence of disease may be in distal parts of the body. In such cases it is probable that undiscovered change had primarily taken place in special or cerebral tissues. The nerve supply simply induces pathological changes in organs and other structures. The various changes in such diseases as those of paralysis, spasm and atrophy can be accounted for in their invasion and progress by assuming the causes to exist from nutritive changes in the trophic centres, that is, when no traumatic condition is present. When centric and eccentric causes operate chronologically, the duality of malign influence is now named "deuteropathy." Our physiology thus teaches us how much proper nourishment of parts depends on nerve conditions.

It is now generally conceded that tendon—or rather muscular—reflexes are not always coexistent with Duchenne's disease. At one time, and up to a recent date, it was classed as absolutely pathognomonic of locomotor ataxia, but recent researches show that in a large number of cases this sign is absent. It seems evident the absence is due to the condition of the spinal seat of nerve supply (Prevost and Tschirew).

This location is that section of cord which supplies the third and fourth lumbar pairs. The presence or absence of this condition is no doubt largely due to the extent of nerve decay. In a medico-legal sense it is important to know with certainty that the absence of these reflexes is not negative proof of non-existence of locomotor ataxia. We are often asked in cases affecting the mental condition of a testator to diagnose this spinal disease—pure and simple—from the shuffling gait and prehensile unsteadiness of a case of paresis. The fulcrum point is, to describe a disease and its signs with initiatory mental alienation from one which, as a rule, terminates without brain disease and psychical dethronement, or, if so, only at the termination of its course. At any rate, the tendon reflex must be ruled out as having absolutely no diagnostic value in determining this disease from others of a kindred nature.

In this connection it may not be out of place to state that much diagnostic value may be found in Zoochemistry. In locomotor ataxia, for example, amyloid degeneration in the diseased portions of the cord is very characteristic. It has been held by many pathologists to be either colloid or albuminous; this is not always correct, for the well-known chemical reaction of iodine and starch takes place, with the addition of dilute sulphuric acid; and in, addition, the microscope clearly shows bluish starch granules. These starch-like bodies are easily seen in many brain affections, and often in paresis. The condition is evidently a retrograde metamorphosis of the nerve cells. When we think of our chemistry, and remember the definite changes in the alcoholic series of bodies from starch to sugar, alcohol, acetic acid and finally into carbonic acid and water, we know that all only contain three elements with different groupings and greater oxydation, and thus complexity of the analogous bodies increases.

Cerebrin is a nerve substance containing these radical elements, combined with nitrogen and phosphorus. In a degenerative and descending scale, deoxydation would bring about a more primitive grouping of this and analogous substances, and as a result a starch-like body would be generated; in other words, it might be a sugar product. The deoxydation may be caused from deprivation of properly oxygenated blood in nerve tissue, or from an undue formation of deleterious acids in wasting tissues, or from a deficiency of nerve pabulum, or all combined. There is no doubt but the amyloid condition is more frequent than is generally supposed, and is often mistaken for fat granules, or albuminous products. Fatty degeneration may be a disease peculiar to itself, or it may be simply a change of the carbon hydrates into that form, or a sort of secondary degenerative process. A *cerebraic* sugar is thus generated, which gives a starch reaction by loss of the proper equivalents of water. This want of the normal hydrate oxide is doubtless one cause of shrinkage of brain tissue. It is atrophy from a drying up process.

The importance of further investigation, through the aid of chemistry, need scarcely be stated, but differentiated chemical tests of pathological products is one of the possibilities of the future.

Along these lines our busy workers have done

much to advance our knowledge of disease. Many pathological conditions are so distinctive that we can now state with certainty the different forms of cerebro-spinal maladies, which were heretofore only judged of inferentially. For example: The brain of a paretic needs only to be seen to enable us to write out with assurance the general etiology of the case. The condition of the blood-vessels and the presence of distinctive adventitious tissue give us a certain clue to syphilitic insanity. The atrophy of senile decay consequent upon increase of earthy substances and the decrease of normal constitutents are certainties beyond peradventure and are paralleled in the shrinkage of the brain of the youthful insane. The psychical, the physiological, the vital and the chemical elements have disintegrated or are undergoing these series of descending processes in the inverse order of building up. They are returning in due procession to the primal condition of existence. We see all the gradations at once in brain atrophy, and know their relation to dementia and mental extinction. Pathology has also shown the condition of the spinal cord in locomotor ataxia. Thus might be lengthened the list of those diseases whose manifestations show on the one hand, what mischief is going on in nerve tissue, and on the other, the conditions being given, we are able to formulate the results which flow from central lesions.

It would be impossible for me to enter into a discussion of the life history of pathogenic micro-organisms, and to show their relation to pathological conditions in the great nerve centres. The fact of their existence and malign influences has passed the stage of speculation, but their causative position in the vital organism is yet in the region of hypothesis. Their power to originate disease *de-novo*, each according to its kind, in a healthy body, is one thing, and their activity to simply excite specific disease in an unhealthy *nidus* is quite another. In the former view they would be absolutely causative and resistless, in the latter they would only occasion the abnormal manifestations when the soil was ready for the seed. These are the two radical ideas, which so far are being investigated by great thinkers. The practical point in this monograph is, that no physician can honestly ignore all the facts of neurological research, proximate and remote, in his diagnosis, and expect to be a great success as a medical practitioner. The physician whose explorations are simply confined to the organ, or the part which may be throwing out signals of distress, yet whose origin may be in distant parts, is like the gardener who is treating for disease the shrunken up buds of a tree, when the trouble may be in the roots of the tree itself.

SYMPHYSEOTOMY *VERSUS* THE INDUCTION OF PREMATURE LABOR.

BY CHARLES P. NOBLE, M.D.,

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Until within comparatively recent times, when labor became seriously or insuperably obstructed, the efforts of the obstetrician were directed toward saving the mother. The rights of the child received scant attention, and its life was deliberately sacrificed in order to diminish its diameters whenever the pelvic canal was too contracted to permit the passage of the normal fœtus. This practice was condemned by theologians, more especially the Roman Catholics; but was justified on the ground of expediency, the position taken being that, if without the intervention of art both mother and child would die when left to the unaided forces of Nature, the physician was justified in destroying the child that the mother might live. With the revival of the Cæsarean section, under the influence of modern surgery, this ancient position has become very materially altered, and the present tendency is most decidedly to give serious regard to the rights of the child in unnatural labor. Three problems have grown out of this development of the question. 1. Is embryotomy upon the living child, when deliberately elected over the Cæsarean section and symphyseotomy, a justifiable operation? 2. Is it justifiable, in labor in moderately contracted pelves, when the obstruction is considerable and yet not insuperable, to make such violent efforts at delivery, either by forceps or version, as to threaten the serious injury of either mother or child, instead of resorting to symphyseotomy when judicious and well-directed efforts at delivery have failed to accomplish it? 3. In women known to suffer from contraction of the pelves of moderate degree, is it better to induce premature labor sufficiently early to permit

the delivery of a living child, or to allow the pregnancy to go on to full term and to effect delivery under symphyseotomy, if this proves to be necessary.

The first problem as to the justifiability of embryotomy done upon the living child, I take it, has been settled in the negative. The question no longer is, Shall both mother and child be permitted to die? nor is it, Shall one be destroyed in order that the other may live? The problem now is, Shall the effort be made by the Cæsarean section or symphyseotomy to save both mother and child, thereby increasing the prospective mortality of the mothers from one to three per cent. as contrasted with embryotomy? Or, to put it in another way, Shall one hundred children be destroyed in order that the lives of from one to three mothers shall not be put in jeopardy? As this question has only a relative bearing upon the subject under discussion, we shall not consider it further at this time.

The second problem is one which is now only coming up for solution, and has been brought to the front partly because of the large number of children who perish as the result of difficult labors, either during birth or shortly thereafter, and partly because of the very considerable number of children who are injured for life from the same cause. These are the "spoiled babies," having sustained injuries to the head, such as depressions or fractures, or great distortions of the skull, or injuries to the tissue of the brain itself, resulting in hæmorrhages and subsequently in localized palsies, epilepsy, or in greater or less impairment of mental vigor.

The comparative safety of symphyseotomy suggests that the accepted teachings of the present be critically revised with reference to the conduct of labor in cases in which the obstruction is considerable and yet not insuperable. I am inclined to believe that in the near future these considerations will considerably alter the present rules of practice. In the interests of the child, version will be less frequently resorted to. And in cases of moderate contraction of the pelvis, in which the unaided efforts of the mother, assisted by the judicious employment of forceps, do not succeed in accomplishing delivery, instead of employing violent traction efforts (which so generally injure the child, and are liable to injure the mother) symphyseotomy will be done. These remarks are not made in a dogmatic spirit, but simply indicate the drift of my own opinion concerning this subject.

The third problem is the one which immediately concerns us to-day, and it is my purpose in this paper to present the advantages of symphyseotomy as contrasted with the induction of premature labor in the management of cases of labor in women having moderately contracted pelves. The class of cases more especially referred to is the flat pelvis with a conjugate diameter of three inches or more, and the generally contracted pelvis with a conjugate diameter of three and a-quarter inches or more, and even flat pelves with as short a conjugate diameter as two and three-quarter inches. It is recognized, of course, that disproportion between the head of the child and the pelvis depends not only upon the diameters of the pelvis, but also upon those of the head, and that spontaneous labor, or labor assisted either by the forceps or version, is quite possible in this class of cases when the head of the child is small or more than usually compressible. Given a woman in the eighth month of pregnancy, having a pelvis of the class under consideration, what shall be done? Shall labor be induced sufficiently before full term to permit the spontaneous delivery of the child, or its delivery assisted by forceps or version; or shall the pregnancy be permitted to go on to term, and then, if necessary, symphyseotomy be performed? This question, of course, must be studied from the standpoint both of the mother and the child. From the standpoint of the mother we have to consider the mortality and morbidity of the operation of inducing premature labor as contrasted with that of symphyseotomy. The general mortality of the induction of premature labor is given in the text-books as five per cent. The general mortality of symphyseotomy is stated to be about ten per cent. As a matter of fact, I believe that both these statements are decidedly erroneous. Five per cent. is undoubtedly too high a mortality for the induction of premature labor. I have reason to believe that in good hands, when the indication for its performance is contraction of the pelvis, its mortality does not exceed one per cent. The dangers to the mother under these circumstances are far less than they are, for example, when the indication is puerperal

eclampsia or placenta prævia. On the other hand, it is quite as absurd to say that the inherent risks to the mother from symphyseotomy are so great as indicated by a ten per cent. mortality. It is the old story of the fallacy of miscellaneous statistics. For the sake of argument it may be admitted that the general mortality of symphyseotomy is ten per cent. This represents the results which have been obtained under the conditions which exist in the practice of the profession at large. It includes cases in which the indication was proper, the operation skilfully done at the right time and after a proper technique, by skilful men; and it also includes the "too late" cases, in which the patients have been maltreated by midwives or by careless or ignorant practitioners before the performance of symphyseotomy, which conditions have nothing to do with the inherent risks of the operation. In order to contrast the relative dangers to the mother of symphyseotomy and the induction of premature labor, it will be necessary to analyze the cases. It must be recalled that the induction of premature labor is an operation done at a selected time, upon women in good condition, almost invariably by an obstetrician of experience. For the comparison to be just, only such symphyseotomies should be selected in which similar conditions prevail. Under these conditions I am satisfied that the maternal mortality will not exceed one per cent. under either operation.

In support of my judgment concerning the slight inherent risks connected with symphyseotomy, I have to submit the following recent statistics of the operation, kindly furnished me by Dr. Robert P. Harris.

Since March 8, 1893, there have been 31 symphyseotomies in the United States, with 2 women and 7 children lost. In the fatal cases one woman was in labor three days before the operation, and died of sepsis on the eleventh day. The other was in labor thirty-six hours, had a temperature of 102° and a pulse of 140, her vagina being œdematous and badly torn by forceps before entrance to the hospital. She died of marked shock in twelve hours. Three children were dead before operation, 2 were delivered by version and died under extraction, and 2 died soon after extraction.

Prof. Paul Zweifel, of Leipzig, has operated 23 times without the loss of child or mother.

The Italian record is incomplete. Since January 1886, there have been 55 operations, with 2 women and 8 children lost. One woman was in labor ninety-six hours and died of septicæmia. The other had a long labor, with shoulder presentation and prolapsed cord, and died of metro-peritonitis after twelve days.

These statistics strongly support my statements. The fatal cases were in bad condition when operated upon, after the failure of other methods of treatment, and there was no reason in any of the cases to believe that the death was in any way due to symphyseotomy. On the contrary, it was due to the conditions which were present before its performance. These statistics also include many other cases which were in bad condition at the time of operation, yet which nevertheless recovered.

I cannot refrain from calling attention to the large number of deaths among the children delivered by version after symphyseotomy, in this country. It is to be hoped that this plan of delivery will be abandoned in favor of the forceps.

From the standpoint of the child the advantages all lie with symphyseotomy. It has been amply demonstrated that a large percentage (about sixty-six and two-thirds per cent., according to Winckel) of premature children die within a few months of birth. With the incubator the infant mortality in hospitals was eighteen per cent. in the Leipzig Maternity and thirty per cent. in the Paris Maternité. Winkel's statement is explained by the large mortality among premature infants during the first year of life. The contrast between the prospects of a premature child born four or six weeks before full term, are altogether in favor of the latter, whose prospects are nearly as good as the average of infants. This fact, and the conviction that the dangers to the mother are about equal, have convinced me that symphyseotomy at term is to be preferred to the induction of premature labor.

A paper by Dr. Robert P. Harris, read before the American Gynæcological Society, in 1892, giving detailed reports of the results of symphyseotomy in Italy, convinced me of the slight risks inherent in the operation. At that time I had under my care Mrs. G., who was seven months pregnant with her fifth child. She had been delivered once of a small child (not weighed) by

vigorous traction efforts made with the forceps, the child being born with its head so injured that it lived but a short time. The second labor resulted in the spontaneous delivery of a very small child (not weighed). The third labor was a Cæsarean section done by Dr. Howard A. Kelly, with delivery of a child weighing six and fifteen-sixteenth pounds. The fourth labor was induced five weeks before term, by Dr. Kelly and myself, and the baby, a girl, was delivered by me with difficulty, after the application of the high forceps. She weighed five and one thirty-second pounds.

Mrs. G.'s pelvic measurements are as follows: Anterior superior spines, 24 centimetres; cristæ ilii, 26 centimetres; external conjugate, 16.5 centimetres; conjugata diagonalis, 8.5 centimetres; conjugata vera (estimated), 7 centimetres. My thorough knowledge of the capacity of her pelvis, and my lively recollection of the difficulties encountered in delivering the premature child by forceps, made me hesitate to again induce labor. I decided instead to permit the patient to go to full term and then to deliver by symphyseotomy. The patient was informed that her labor would be the first in which symphyseotomy had been done instead of inducing premature labor. My conclusion had the indorsement of Drs. Harris and Parish. Symphyseotomy was done on December 5, 1892, and was followed by the high application of the forceps, and the delivery of a boy weighing eight and one-eighth pounds. The details of this symphyseotomy and the reasons why it was advised have been reported in a communication to the College of Physicians. The mother made a good recovery and again became pregnant. She was delivered a second time under symphyseotomy and the application of the forceps, on March 19, 1894, of a girl weighing six and six-sixteenth pounds, and recovered without other incident than a mammary abscess. She is thus the first woman in the United States upon whom a second symphyseotomy has been performed, as well as the first woman in the world upon whom symphyseotomy has been done in preference to the induction of premature labor.

In conclusion, I submit this paper as a contribution to modern obstetrics, in the hope that it may aid in quickening the interest of the profession in the rights of the unborn child. As the subject is comparatively new, it is probable that the general experience of the profession will modify our views in certain particulars; but, as progress is ever forward, such changes will almost surely be in the direction of adding to the life-saving value of the agencies already at our command.

Selected Articles.

HEREDITY: ITS RELATION TO INSANITY AND IDIOCY.

In response to an invitation from your President and Secretary to participate in the discussion of the subject of "Heredity in its Relation to Insanity and Idiocy," a promise was made to divide with others the time that might be assigned to its consideration.

There has always existed a deep seated conviction that certain diseases are transmissible by inheritance from parent to offspring. This conviction is strongly fortified by an array of statistics which, if accepted without reservation, might in themselves establish the fact. It is quite common to place insanity and idiocy in this category. So prevalent is the belief that insanity is directly transmitted by inheritance that in medico-legal proceedings it is usual to consider it a strong defence to show that insanity existed in the family of a person charged with crime. So well-grounded is the opinion that insanity may be due to a direct inheritance that its existence is the shadow that darkens households, affects plans of domestic arrangements, blights the happiness, and shapes the destinies of a large number of persons. Doubtless the mystery that surrounds the complex operations of the mind—the reported results of operations by physicians—the absolute ignorance of the laws of heredity—beyond the ken of human comprehension—have together conduced to the acceptance of speculations as actual results of well-established facts. Doubtless religious views, coincidences of events, overworked facts and ignorance have exercised an influence in the formation of opinions of this subject and their unquestioned acceptance.

That every species produces its kind is a universally recognized law. That there are physical and psychical characteristics which belong to the individuals making up the many nationalities which are transmitted and preserved from generation to generation; that there are so-called temperaments which have a certain uniformity of physical and psychical development so that they may be recognized and described, is a matter of common observation. Darwin has also presented the theory "that each of the atoms or units constituting an organism reproduces itself."

Heredity manifests itself in family likeness, the hair, gait, height, form, temperament and physical development. The "atoms or units" proceed in accordance with some uniform law of development, so that, however the stock may be crossed, the rule is that man transmits his exact physical counterpart, subject to modification due to environment, climatic conditions, etc. That the vigor of the stock does not abate is witnessed in the fecundity of the human race.

Whether a similar unvarying law governs the transmissibility of psychical qualities may be a question or in doubt. The same consensus of opinion, however, is disposed to conclude that mental traits are transmitted from parents to children in the same degree that physical qualities are inherited. This is partly true only, but the exceptions are so numerous that it may be considered a chance that the children will possess the psychical qualities of the parents. It has been demonstrated by histories of families in England that strong qualities of mind have been transmitted through generations. On the other hand, this Society may be familiar with the history of a family in New York State comprising 1200 persons of several generations, traced by Mr. Dugdale, who as paupers, lunatics, idiots, criminals, murderers and prostitutes were estimated to have cost the county of Ulster the enormous sum of $1,300,000. In making inquiry of the ancestry of a certain family in Yates County, New York, it was ascertained definitely that 22 insane persons, criminals, paupers, or idiots, could be traced in two generations to an abandoned woman. The influence of marriages of consanguinity deserves a notice in this direction. Dr. S. M. Bemiss collected some statistics which show the nature of the deterioration that may come from this source. Of ten instances of incestuous commerce, 31 children were born; 29 were defective, viz., 19 idiots, the balance epileptic or deformed. Of 823 marriages of cousins, 3942 children were born, of whom 1105 were defective, 145 deaf and dumb, 85 blind, 308 idiotic, 60 epileptic, and only 38 insane. The results of consanguineous marriages furnish a heredity of physical imperfections rather than of psychical disease. Notwithstanding these results, and the necessarily crude notions that commonly prevail, as well as the probabilities they suggest, it must be stated there is absolutely no unvarying law of transmission established by these reported facts, because of well-known exceptions.

The average normal psychical development is not as often due to transmission or inheritance as to influences of environment, education, the degree of mental receptivity, together with the evolution that goes on from age to age. The quality called genius and knowledge does not seem to be transmitted by inheritance, but a receptive faculty, a capacity to acquire knowledge and evolve ideas, may be a heredity. The term heredity is well-defined as "the principal or fact of the transmission of psychical or mental qualities or tendencies from ancestors." (Gould's Medical Dictionary.) The instances of the transmission of "qualities and tendencies" that have been cited, and those results which sometimes appear after consanguineous marriages, are marked examples of both physical and psychical deteriorations, mental and moral degeneration, of mental and bodily failure—increasing in intensity with successive generations—and of those defects that follow such marriages, according to the principal of reversion or degeneration, in a backward direction, even to the extinction of the line of succession. Dr. Seguin observed: "I have not, to my knowledge, ever had to attend an idiotic son of an idiot, or even the son of a man of weak intellect."

A hereditary disease is one that may be transmitted directly from parent to child. Admitting that it is established that certain physical diseases are inherited, can it be shown that insanity should be classed in this category? If it is not an inheritance, may it not in certain cases be ascribed more properly to the results of heredity? And within what limitations? Individual opinions, formed from a knowledge confined to a limited number of cases, lead some to a conclusion without further reflection. Psychological theorizing leads others to collect data to support their views, and a personal element comes to enter in to throw doubt about the value of any statistics. Hospitals for the insane have contributed their quota, which their medical officers have reported. Thus, Esquirol reported 33 per cent. of his cases were hereditary; Brigham, 26 per cent.; Thurman, 32 per cent.; Aubanel, 4 per cent.; Burrows, 85 per cent.; Hood, 9 per cent.; Moreau, 90 per cent. These statistics were all compiled prior to 1860, and cover a period of 50 years. What rule was applied in their preparation does not appear. The wide range of results at once suggests a great lack of uniformity of material, wide differences in opinion about what constitutes inherited insanity, and a wide latitude in speculation. Since 1860, the percentum of reported cases of hereditary insanity has decidedly fallen off, although insanity has greatly increased. In some reports of hospitals neither the terms "hereditary insanity" nor "heredity" appear in the list of assigned "causes." In other hospitals the number of cases assigned to heredity has been steadily declining. At the Pennsylvania Hospital for the Insane, of 10,560 cases, heredity was assigned as a cause of insanity in eight cases in every thousand. At the Utica (N. Y.) State Hospital, where the statistics have been prepared with a considerable degree of uniformity, the annual percentage varies from four to six. While in some of the American hospitals it is somewhat larger than that just

named, generally the reported percentage in European hospitals is very much greater than in this country. Possibly this is owing to different social conditions that prevail, in breeding, debauchery of parents, greater mental and physical deterioration, the lines on which observers have made up their statistics, as well as the tendency to accept and follow views of recognized authorities. Whatever may be the explanation of the differences of reported results, it is apparent that in recent years the tendency is to attach less importance to the assumption that insanity is directly transmissible by inheritance. By many it is wholly ignored as a direct factor in the production of any considerable amount of insanity; at least inheritance is not named as an assigned cause. If the statistics presented had been prepared by observers holding the same theories, and from exactly the same data, there would be but one conclusion—that the inheritance of insanity (if there be such a thing) is rapidly diminishing.

Referring to personal observations, an examination of 347 patients admitted during two years in the Pennsylvania Hospital showed that the probable and direct causes of insanity in 188 cases was neurasthenia, or nervous exhaustion from overwork, strain and worriment; some form of general ill-health; the puerperal state; septic conditions, etc., and the element of inheritance did not appear or was not ascertained. The remainder were cases of paresis and other forms due to brain degenerations, senile failure, or organic disease, some with a history of marked heredity. Twenty-seven, or 14 per cent., only had a family history sufficiently marked to warrant the assumption that heredity was the probable cause of insanity—that is to say, there had been insanity in parents or along a family line. Exceptionally marked instances of insanity in amilies have come under my notice, of which two may be briefly presented: Three sisters were brought to the Pennsylvania Hospital on the same day. A brother, said to have been demented, had died about two weeks previously, as was inferred, from gradual inanition and neglect. All had similar delusions of suspicion, of the operation of unseen agencies, which extended to their food, clothing, beds, the air of their rooms. The family history could not be obtained satisfactorily on account of the extreme reticence of all parties. The father had held a high official position under the Government. It was an illustration of those cases of rare occurrence where insanity is communicable in a family, or to persons closely allied in companionship and life, with few relations to the world about them. In this case one sister became insane, and gradually dominated by her superior will-power the other two. From the eccentricities of these people, their isolation and physical appearance, there had evidently been a degeneration, physically and psychically, from the normal family standard.

Recurring to the reference made to 347 cases, mentioned above, it was stated that in 188 the cause in each was directly traceable to some incident in the life of the patient or to a physical deterioration or disease There was sepsis, loss of body weight, deterioration in the quality and constituents of the blood. The nutrition of the brain was impaired, and while many thousands of persons suffer in some degree from those conditions and recover, insanity, which is so often only a relative condition, was but a further incident in the cases cited. In other words, insanity, or mental disorder, as in these cases, was acquired. More than 140 recovered. Now, will it be said that they had acquired something they could transmit as an inheritance? If so, what was it? Is there anything material, as a bacillus of insanity, that may be received as an inheritance? That a neurotic temperament may be a heredity is believed to be in accord with common observation. Such, however, is the superstitious, vague sentiment existing in relation to insanity that a fear of contamination is the family skeleton. In relation to the class of cases we are now considering, it is a practice to assure relatives, when recovery does take place, that the probability of a recurrence or of the transmission as an inheritance is no greater than in those persons observed by the physician who have a pneumonia, rheumatism, or fever. Suppose the fact were otherwise, and insanity in some degree was directly transmissible by inheritance, surely man would rapidly deteriorate and degenerate until mental soundness would be of rare occurrence, and in the case of idiots and imbeciles the race would end, as they would cease to procreate.

In the procreation of children, if both parents are of exactly equal potency and not related, the expectancy will be that the physical and psychical characteristics of their children will have a close resemblance to the parents. Thirty-one marriages of parties not known to be related or descendants of relations, produced 207 children. None of the children were reported to have been born with any defect. (Dr. Bemiss.) If the potential power of one parent is less than the other, and this may be the general rule, while the expectancy would be that the offspring would partake of the stronger parent, there is no absolute rule, even here, notwithstanding the probabilities. There is a corrective process in constant operation. That nature, constantly, wholly eliminates or limits the influence of the weaker element is certainly true, as many families show members of very opposite degrees of psychical development. The reverse is also true, that deterioration is sometimes not wholly eradicated, but continues in an increasing degree. Two persons of marked neurotic organiz-

ation may transmit their temperament to offspring in a more intensified form, and in the second or third generation, if there is no cross by which it may be by chance corrected, a neurotic heredity or predisposition is established, from which may come with slight exciting cause some form of mental degeneration, acute insanity, epilepsy, etc. In-breeding of temperaments, then, rather than consanguineous in-breeding, is more conducive to the development of the neuroses, to eccentricity and insanity of the degenerative type.

In the discussion of heredity in its relation to insanity and idiocy an attempt is made to show the diversity of facts and views that exist, that there is often a personal element that enters in the preparation of statistics, that are limitations of our knowledge; also, to formulate an expression of views or principles which are now presented as conclusions:

1. Physical characteristics, those distinguishing the human species, are transmissible as an inheritance.

2. Knowledge, genius, and culture are not an inheritance, but depend rather on influence, education and environment. Mental receptivity is transmissible. Psychical qualities are not necessarily an inheritance requiring favorable surroundings and circumstances for growth and development.

3. Insanity as a disease is not transmissible by inheritance, but may be acquired or evolved from a neurotic heredity as a basis.

4. A neurotic predisposition is transmissible by inheritance, but there is no absolute rule that it will be transmitted in any given case, or in any case.

5. In-breeding of neurotic temperaments is most conducive to the creation of a neurotic heredity.

6. Idiocy and imbecility may be a defect, having an origin in consanguineous marriages, prenatal condition, accidents, arrested developments, infantile meningitis, tuberculosis and lack of potency on the part of one of the parents from unexplained causes.—John B. Chapin, M.D., in *Times and Reg.*

THE THEORY AND PRACTICE OF PROTECTIVE INOCULATIONS.

Dr. Klein delivered a lecture on this subject at the London Institution, Finsbury-circus, on Monday, March 4th. Starting with the axiom that "the more accurately we know an enemy, the more easy it is to overcome him," Dr. Klein said it nowhere more adequately applied than in the prevention and treatment of disease. Since it had been conclusively shown that communicable diseases were caused by specific parasites which elaborated within the body specific poisons called "toxines," causing the particular symptoms of the disease, it had become possible to study more accurately these causes of disease and devise better means by which the life of the parasites and the action of their toxines might be inhibited or altogether destroyed. The treatment of infectious disease had been greatly advanced, and although some of these disorders were still in a stage of generalities, far-reaching changes had taken place in others. The system of antiseptic surgery discovered and applied by Sir Joseph Lister—instrumental in reducing the mortality of surgical operations, once very high, to an almost nominal figure—and the exact knowledge we now possessed of the propagation and spread of cholera and typhoid fever by means of water, milk, and other articles of food were cases in point. Scientific medicine, in contradistinction to empirical medicine, had acted on the more rational axiom that "he who cures may be the cleverer, but he who prevents disease is the safer physician," and had gradually unravelled the complex problems of the nature and cause of diseas:, and in many instances devised means of preventing communicable disease. Dr. Klein then referred to the remarkable achievements that had been made in general sanitation and in the direct prevention of disease by means of protective inoculation, of which Jenner's discovery of vaccination was the earliest example. In all civilized countries and among all civilized peoples the protective power of vaccination against small-pox had been amply confirmed and established. Two points were particularly worth considering—(*a*) was vaccinia or cow-pox a modified or attenuated form of human variola? or (*b*) was it a separate and specifically different disease? With regard to the first point, most pathologists and sanitarians agreed with the original proposition enunciated by Jenner—namely, that vaccinia or cow-pox was a mild form of small-pox in the cow, and just as an individual who had passed through one attack of small-pox was furnished with resistance and immunity against a second attack, so also an individual who had been successfully vaccinated has practically passed through a mild attack of localized variola, was therefore possessed of immunity against a second attack, and was protected against small-pox. In some other infectious diseases—scarlet fever, measles, and whooping-cough—one attack, however mild, furnished, as a rule, immunity against a second attack. This was acquired immunity, as distinct and different from natural immunity, as, for instance, the natural immunity of most young children against typhoid fever or cholera, and of many adult persons against measles. With regard to the second point, many pathologists, while recognizing the protective power of vaccinia against small pox, did not admit that cow-pox

was an attenuated form of the human small-pox, but that it was a specifically different disease. This belief was based chiefly on the many failures which experimentalists had incurred in trying to produce cow-pox in the cow by inoculation of this animal with human small-pox. It was equally true, however, that there had been many positive results, inasmuch as in a few instances there had been produced in the cow by inoculation of matter derived from the vesicles of human small-pox typical cow-pox, which on transmission to the human subject produced vaccinia and not variola, and on further transmission from human being to human being continued to produce vaccinia in all its typical characters. Thiele, Ceeley, Badcock, and, in more recent times, Voigt, Fischer, King, Simpson, Hime, he (Dr. Klein) himself, and Copeman had had unmistakable positive results. The argument which maintained that vaccinia was of a specifically different nature from human variola was faulty for two reasons. First, as a matter of actual experience, vaccination was now and then followed not simply by the production of a vaccine vesicle at the seat of insertion, but there appeared other additional vesicles even of the character of a general eruption; this, though of rare occurrence, was nevertheless a strong argument for its derivation from variola. Secondly, the "breeding true" of vaccinia in the human subject through however many transmissions and the failure of a reversion of vaccinia into variola were completely paralleled by what occurred in a disease occurring in the sheep, and was in all respects homologous to variola—namely, variola ovina or sheep-pox. Protective inoculation was used against this disease with large success in the South of France, Austria and Germany. The lymph was "nursed" by local insertion through a succession of sheep, always producing a large local vesicle with mild constitutional symptoms. Such local inoculations had been practised over and over again, and as a general rule only at the places of insertion did a vesicle become formed; there was no general eruption, and, therefore, no reversion to the original type. It was clear from this that lymph derived originally from a vesicle of true variola of the sheep "bred true"—*i.e.*, produced on transmission from sheep to sheep only local protective vesicles. If, however, this lymph were injected into the vascular system of a sheep, true variola might be the result. Cheauvau, he (the speaker) and others had had cases of this kind. But while the inoculation was made by cutaneous insertion, local vesicles only resulted. From this it followed that the argument because lymph derived from the cow and transmitted through human beings did not ultimately revert to variola, but produced a local vesicle only, in no way justified the conclusion that the two diseases, variola and vaccinia, were specifically different. The conclusion to be drawn from this was that Jenner's original contention was established. Dr. Klein then briefly referred to the work of Pasteur on anthrax and foul cholera—a work which had been made possible by the discoveries of Koch. Satisfactory results in protective inoculations on the same lines as those pursued by Pasteur had been obtained in several—swine fever, swine erysipelas, etc.—but not in all infectious diseases. Unfortunately, not in all infectious diseases did one attack protect, although a first attack furnished, for a time at any rate, a certain resistance; such was the case in diphtheria. In cases of acquired resistance or acquired immunity a condition was produced by the first attack by which the body was rendered unfit for a second attack. This sometimes happened after a mild first attack, but in other instances this only furnished a slight resistance, and in still others no resistance. In these two latter cases the resistance could be increased by repetition of the mild attack and by using the second time a somewhat stronger virus and producing a somewhat stronger effect, but still only a passing one; and after many repetitions in these cases the resistance thus acquired could gradually be increased to a high degree. It had been shown, both for animals and for man, that the immunity produced by artificial inoculation of attenuated culture or acquired in the natural manner by a first attack of the disease, was due to the presence in the blood of chemical substances produced in the course of the first attack; these substances were capable of neutralizing the activity of the specific microbes. Moreover, it was found by Behring that the injection of blood serum of an immunized animal was capable of protecting an otherwise susceptible animal and of furnishing it with immunity, so that infection with the microbes of the particular disease was prevented. The degree of this protective or immunizing power of the blood of an immunized animal stood in direct proportion to the degree of immunity or resistance which that animal had acquired by the previous injection or by the previous attack. That in diphtheria the blood of an immunized animal possessed an immunizing or protective property in other animals had been fully proved, but it must be added at the same time that the protection thus produced was only of comparatively short duration. In the experiments in which the immunizing and protective action of the blood serum of an animal artificially immunized against diphtheria or tetanus respectively was ascertained, another important fact was elucidated by Behring, afterwards confirmed by a large number of workers—viz., that this serum not only possessed protective potency when injected into an otherwise susceptible animal, but that if injected into an animal in which the disease had already made its appearance it (the disease) could be cut short and

the animal would recover. The serum, therefore, acted as a curative agent. Such serum had been applied both in diphtheria by Behring and Roux, as also in tetanus by Tizzoni and Centanni, with striking success in the human subject; and the published accounts of the cases so treated in Germany, Austria, France, Italy and England placed it beyond doubt that in a large percentage of cases the disease was cut short, and even in severe cases recovery achieved. A question of great scientific interest was the manner in which the serum of animals immunized against diphtheria or tetanus acquired its protective and its curative potency. Looked at from a theoretical point of view, this double action might be due to either of two things: (*a*) the serum might contain one substance which had both these actions, or (*b*) it might contain two different substances, one for each separate action. The whole subject was only at the commencement of being understood, but this much was already certain, that the work on a sound experimental basis had already been productive of good results, and was likely to be productive of still greater achievements in the field of protective as well as curative practice.—E. E. Klein, M.D., F.R.S., in *Lancet.*

PSYCHOLOGICAL INTERPRETATION OF HYSTERICAL ANESTHESIA.

Pierre Janet, known for his investigations on automatic states and works on the psychology of the hysterical, has attempted an explanation of hysterical anesthesia accepted by Dutil in his monograph on hysteria as the best yet given. He refers the anesthesia, as well as other of the paralytic stigmata of hysteria, to an enfeeblement of the higher functions of the cortex; in fact, there is now a general consensus in attributing this disease to anæmia and malnutrition of the cortical centres. The idea of a narrowing of the field of consciousness, corresponding to the contraction of the field of vision, as the basis of the anesthesia, is peculiar to M. Janet's "interpretation." In brief, his explanation is substantially as follows:

Hysterical anesthesia is a species of *distraction.* In the normal individual under the influence of voluntary abstraction phenomena are witnessed not entirely differing from those which characterize the anesthesia of the hysterical. A person is engaged in his ordinary occupation and does not hear the din of the crowded city or perceive objects or contacts; he is, we say, busy with other things. When the attention is strongly applied to a subject of interest, even violent sensations may fail to elicit any response. Pascal forgot his physical sufferings while endeavoring to solve a problem. Now, hysterical persons have such distractions intensified. It is easy to produce in them by diverting their attention momentary insensibilities which have all the characters of their permanent anesthesias.

At the same time, the permanent *stigma*, the hysterical anesthesia, cannot be altogether likened to a distraction pure and simple. It is more enduring and is more clearly defined. It exists even when the attention of the person is not engrossed by a fixed idea or some external object. It does not disappear when he desires it, as in the case of the transient insensibilities which accompany distraction in the normal individual. The latter, it is true, does not hear the noises of a large city, the ticking of a clock near him, and yet he can hear them if he tries to. There is, then, in hysterial anesthesia, which is a pathological phenomenon, something more than there is in distraction, a normal phenomenon.

In order to understand the differences which distinguish these two states, as well as their resemblances, it is necessary to have well in mind the psychic mechanism of the *perception of sensations.* We may represent this as an operation occurring in two stages. In the first stage various sensory impressions come to the cortex, constituting the elementary psychic phenomena, the consequences of multiple peripheral excitations (tactile, visual, auditory, etc.) These are the elementary sensations—primary states of consciousness. So far the notion of the personality of the subject does not come in. In the second stage a reunion, a synthesis, is effected of these elementary phenomena with the vast notion of personality, that is, with that aggregate of memories, of past sensations, of facts previously acquired, which constitute the idea of personality which enables the subject to recognize, that is, *perceive* them as like or unlike, Janet calls this *personal perception.*

Now the man best endowed is incapable of thus regrouping together, at each instant, in one same personal perception, all the elementary sensations awakened in him by the innumerable excitations which constantly assail his various senses. A great many of these elementary sensations are not included in his personality. They have not passed the threshold, and remain thus, *unperceived* but *real*, in the state of *sub-conscious* sensations. The maximum quantity of sensations which the subject can at a given moment assimilate, re-group in his personal perception, will give the measure of the *extent of his fields of consciousness.*

Suppose the case of a normal individual listening to a lecture. He will perceive a certain number of sensations, auditory, visual—the words, the voice of the lecturer, his attitude, his gestures; but all the rest, the tactile, thermic, muscular impressions which he may receive at the same instant will pass unperceived, and remain in the state of sub-conscious sensations. If instead of listening

to a lecture, he undertakes immediately after the solution of a problem in algebra, his field of consciousness will be occupied by another series of sensations and images, all other sensations remaining in their turn in the state of sub-conscious phenomena. But by reason of the alteration of perceptions, as fast as he applies his attention to different objects furnishing different sensations, he will be able at last to perceive all the impressions. By this we can understand what is distraction, simple and normal.

Suppose now the case of a patient whose mental activity is enfeebled, whose field of consciousness is in a certain sense contracted to the point that he can no longer perceive at once more than a very small number of sensations; this person will neglect little by little to attend to the sensations which are least important for his habitual duties—the tactile sensations, for instance—applying himself to those, more indispensable, of hearing and of sight. During a certain period he will still be capable of heeding those neglected sensations and of rearranging them momentarily in the field of his personal perception when his attention is directed to them; but at length the "bad psychological habit" is formed, and the time comes when he no longer can perceive them consciously; we prick his arm and to his surprise he does not feel the prick. After having been "distracted" (*un distrait*) with regard to these sensations, he has finally become anesthetic. The anesthesia of hysterical persons is then a symptom of weakness, of mental torpor; it is the consequence of the narrowing of the field of consciousness. These patients being able to grasp and include within their personality only a very small number of sensations, insensibly accustom themselves to direct their personal perception always toward the same group of sensations, and they come at last to the point where they can no longer apply it to the group of sensations which they have formed the habit of neglecting.

These theoretical considerations enable us to understand why at the onset of their malady, young hysterical patients have no anesthesia. They have only transient insensibilities, mobile at will, which the least distraction brings into being and which a little attention suffices to dissipate; at a more advanced stage, these insensibilities tend to become fixed and permanent. A more forcible appeal to the attention is then necessary to bring back momentarily the personal perception of sensations becoming more and more faint. Those sensations which are not perceived by the personality are nevertheless real; they are not entirely lost. They persist and continue to act in the latent state beneath the horizon of consciousness. In this sub-conscious state they may still have motor effects and influence other ideas. Most hysterical patients under hypnotism recover these impressions which were not consciously experienced during the waking state.

If we apply to hysterical anesthesia these essential notions, we may say that this morbid condition consists in an enfeeblement of the personal perception, which is limited to a certain order of sensations, to the exclusion of others. The other sensations unperceived and remaining in the sub-conscious state are nevertheless real, persist, act, and take part in the automatic functionating of the person's mind. We can understand why these anesthesias are sometimes systematic, elective and mobile; why they disappear temporarily by suggestion, or when by any means the attention of the subject is forcibly directed to certain of these sensations apparently lost; also why these anesthesias are aggravated when the patient is distracted by a reverie, by the obsession of a fixed idea, etc.; why, in fact, since the sensations which seem not to be perceived exist in reality in the sub-conscious state, these anesthesias do not entail grave perturbations in the automatic functions of these patients; finally, why these anesthesias are a matter of indifference to the patients and sometimes exist without their knowledge. Janet thinks that the interpretation which he has proposed of the tactile anesthesias may equally be applied to all the sensorial anesthesias, and that it makes comprehensible the particular characters of hysterical amblyopia. It is quite natural that the patient should neglect from the first the sensations which correspond to the eccentric parts of the visual field, and that he should perceive only the images the nearest the point of fixation. Hence the concentric form of the contraction of the visual field.—Ed. in *Boston Med. and Surg. Jour.*

THE POSTURE OF THE HEAD IN ACCIDENTS WHEN THE PATIENT IS UNDER AN ANÆSTHETIC.

(Concluded from April Number.)

Since Dr. Halsted has fired a shot at the therapeutist, I will have a shot at the surgeon in return. Dr. Abel will agree with me when I state that morphia is not a vaso-motor depressant; on the contrary, it is recognized as quite a powerful stimulant to the heart and vaso-motor system in ordinary doses.

The position I want to emphasize about the head under these circumstances is that it should be extended and craned forward in order to let the air pass in. One of the deaths I saw, which occurred in Dr. Goodell's practice, was due, I am confident, to respiratory failure. I took charge of the head and Dr. J. Wm. White used Sylvester's method of artifficial respiration, and it was interesting to notice the difference in the respira-

tory sounds when the head was in the ordinary position and when it was pushed forward in the way I have described.

The last point perhaps may have some relation to the questiou which Dr. Halsted has brought up in regard to why it is that in some years there are more deaths than in others. So far as I know, there have been no carefully carried out experiments in regard to the fatality of chloroform under varying conditions of the atmosphere. In Galveston there are very few deaths from chloroform. Lawrie has now had about 30,000 chloroform anæstherias without a death, and only a few accidents, not alarming. Perhaps it is that the condition of the temperature of the air—humidity and barometric pressure may have something to do with the quantity of chloroform which is taken into the chest, for it is not the quantity of chloroform which is put upon the towel, but the quantity which the patient takes into his lungs from the towel that is to be considered. This emphasizes still further Lawrie's statement that just as soon as the patient's respiration is getting stormy we must stop the administration, because if you do not do so you will not know how much chloroform the patient is getting.

Dr. Abel.—The question is a matter of dosage. Small or therapeutic doses of morphine have no effect to speak of on blood pressure. It is a very different matter when toxic doses have been taken. It is a notable fact that morphine has a more powerful action on the respiratory centre than on the vaso-motor centres.

I have listened with great pleasure to Dr. Hare's interesting paper. His report to Lieutenant-colonel Lawrie, of the Hyderabad commission, to which he has made reference in his remarks to-night, contains valuable confirmatory researches on the effect of chloroform on the respiration and circulation, and all of us, I feel sure, will agree with him in his conclusions on these points.

The question has been raised to-night of the relative value of ether and chloroform. I was myself brought up under a chloroform regime, and when I first began to teach I put it rather more highly in the list of anæsthetics than I am inclined to do to-day. The Germans are now making a careful examination of the comparative merits of chloroform and ether. Many of their surgeons who have hitherto favored chloroform above ether are turning about and it would appear that chloroform is going to lose the day. Laboratory investigations are giving us fresh proofs of the greater safety of ether.

Chloroform has a remarkable affinity for some of the substances composing the nervous system. The brain and the medulla seem able to pack it away even when it is breathed in very dilute air solutions. Thus Kronecker and Cushing have found that the breathing of air containing only 0 34–0.42 per cent. by volume of chloroform will still lead to paralysis of the respiratory centre; and Pohl, following out some early work of Schmiedeberg's, has shown that in the stage of complete anæsthesia the brain contains about three times more chloroform than an equal weight of blood, blood containing 0.015 per cent. and brain substance 0 0418 per cent. chloroform. We have some information, therefore, as to the localization of chloroform in the body. Schmiedeberg long ago demonstrated that the serum of the blood contains very little chloroform during anæsthesia, not more than would be dissolved in water, and that the chloroform taken up and carried by the blood is bound to its red and white corpuscles. From experiments made by Pohl we know that it is the lecithine, cholesterine, fatty matters, and the protagon of the corpuscles of the blood and of the cells and fibres of the central nervous system to which the chloroform is tied. What proportion of chloroform is taken up by such viscera as the liver we do not yet know.

If so weak a solution as 0.5 per cent. of air volume will still, after being breathed for some hours, cause cessation of breathing, that is rather against chloroform, even in the light of modern improvements in the administration. Paul Bert in 1884, proposed that only a "titrated" air solution, containing at the most no more than 4 per cent. of chloroform, should be used for anæsthetic purposes. This method was employed for a time by a few practical anæsthetics (Clover) and is said to have reduced the number of chloroform accidents. But for some reason or other, either because accidents still occurred or because the required apparatus was cumbersome, the method was given up.

The method of *le mélange titré* is, however, being revived, only ether is being used instead of chloroform. Dr. Spenzer, an American chemist, working in Schmiedeberg's laboratory, has found that the inhalation of air containing 1.5 per cent. of ether by volume, for two hours, causes no anæsthasia in animals, the result being only a mildly hypnotic condition. If the air breathed contained 2.5 per cent. of ether by volume the anæsthesia was also found to be entirely incomplete, the reflexes in this instance being exceedingly lively. When the respired air contained 3.19-3.62 per cent. of ether, complete anæsthesia was attained within 25 minutes, and could be kept up for hours without any respiratory disturbance whatever, and without damage to the heart. When 4.45 per cent. by volume of ether was employed, anæsthesia was complete within fifteen minutes, the breathing was slower but regular, the heart-beats a little more rapid and weaker than normally, but still of a regular rhythm. At 6 per cent. by volume of

ether admixture the limit of safety was reached, for now cessation of the respiration occurred within 8-10 minutes after allowing the ether to be breathed. Artificial respiration, however, always restored the animal, no matter how often the experiment was repeated. Spenzer's experiments, in which careful chemical analyses of the respired air were made, thus substantiate Snow's results, gained many years ago (1858) by crude methods, that an air mixture containing about 3.5 per cent. by volume of ether will keep up an anæsthasia for many hours without endangering the respiration or circulation. We see, too, from Spenzer's experiments that even with ether there is but a narrow limit between safety and death.

This summer, in the pharmacological laboratory at Bonn, I saw an apparatus which allows us to give ether to human beings according to this safer method of *le mélange titré* with great success. The arrangement is such that the mixture can be made of air and ether in such proportions as you want it. It is then carried through valves that are so easily moved that there is no work of any consequence for the chest of the patient. I was told there that they had anæsthetized patients by this method with great success. A further advantage of this method is that air mixtures of ether that do not much exceed 4 per cent. are non-irritating to the mucous membrane of the respiratory tract. Dreser has made experiments on this point and has found that up to 5.4 per cent. by volume of ether vapor the mixtures were pronounced by his subjects to be easily borne.

The absence of knowledge as to toxic doses, that is, as to the amounts pro kg. of body weight from which no recovery is possible, is greatly to be regretted.

Unfortunately, too, we have, as far as I am aware, no careful experiments as to the localization of ether in the organs of the body, and no equally exhaustive experiments as to its chemical fate in the organism as compared with chloroform.

One other point in the way of chloroform is the tendency to degeneration of the important viscera after its use. You cannot chloroform the healthiest and strongest bulldog, notably a tough species of animal, two successive times without his dying from the after-effects of the drug. Keep him deeply under anæsthesia with chloroform for four hours, let him recover, and on the third day following repeat the experiment, keeping him again deeply under the influence of chloroform for four hours, put him away into his pen, he will regain consciousness as usual, but in the course of a few days death will ensue. Whether carefully wrapping up an animal in cotton wool would keep the animal alive after two such periods of heavy chloroforming I cannot yet say.

I have been much struck by the poisonous nature of chloroform in feeding experiments that I have undertaken for the purpose of studying changes in the metabolism of the liver. Repeated doses, even when not large, and single large doses (6-9 grams) according to the weight of the animal, soon cause a profoundly cachectic condition, the animal's coat becomes shaggy, it loses weight and in the course of 6-14 days it dies, no matter how healthy it was before. Others have demonstrated that in such cases a marked fatty degeneration of many organs, notably of the liver, kidneys and heart, has been induced. Kast and Mester have come to the conclusion after an examination of the urinary constituents, particularly of the so-called "neutral" sulphur compounds, that long-continued chloroform inhalations induces a profound disturbance in proteid matabolism, extending over several days. Of no little importance is the fact that it requires consderable time for the organism to get rid of chloroform, whether taken up from the lungs or from the digestive tract. This is demonstrated by the increased elimination of chlorides after chloroform anæsthesia, experiment on animals showing that the greater part of the chlorine of the retained chloroform is excreted in the form of chlorides, and that even on the fourth day after the administraion of the chloroform the urine still contains an excess of chlorides.

One reason then why the Germans are turning about is that their studies have led them to believe that many of the deaths that occur very shortly after a prolonged administration of chloroform are due to the serious lesions of important organs induced by this drug. *Virchow's Archiv* and other journals and the inaugural dissertations of the last seven or eight years have had numerous contributions on this subject.

A recent contribution by Selbach from the laboratory of Prof. Binz entitled "Are fatal after-effects to be feared as resulting from long-continued ether inhalations?" reviews the literature on the untoward effects of chloroform, and describes a series of original experiments made with the view of determining the poisonous after-effects of prolonged etherization, and from these the author is led to infer that there is little or no danger of a fatal after-action following anæsthesia by ether in the case of human beings. Here too, then, on this important side of the question the advantage lies with ether.

Dr. Theobald.—Regarding the use of atropine preceding the administration of chloroform, I may say that for a number of years I have been in the habit of giving a hypodermic injection of $\frac{1}{4}$ gr. morphine with $\frac{1}{100}$ of atropine previous to the use of chloroform, and the effect has been most satisfactory. Not only is the heart-depression in a great measure obviated, but the patient comes more quietly under the anæsthetic, and the recovery from the anæsthesia is slower and more

satisfactory. The patient does not wake u suddenly with restlessness, but wakes up in a sleepy, good-natured state, and submits to the dressing with less objection.—H. A. Hare, M.D., in *Johns Hopkins Hospital Bulletin.*

"WITH US THER WAS A DOCTOUR OF PHISIK."

To those of us who in our leisure hours have had the time and opportunity to study the old English language, there comes, even in the busiest moments, a very pleasing recollection of the lines from Chaucer's pen, and perhaps the favorite one is the Prologue from the "Canterbury Tales."

One's love for books cannot be but increased by careful reading of his writings. To enter upon even any superficial analysis of the several stories that go to make up his wonderful collection, would require much more of time and space than are here permissible. It is perhaps sufficient to call attention to one portion of the Prologue that has a direct bearing upon our own profession of medicine. It will be remembered that in the Prologue is laid before us the general plan and several characters of his whole work—written, no doubt, in the year 1386.

In the Prologue we are introduced to persons of all ranks and characters, brought together accidentally, as bound upon the same pilgrimage of journey. The clerical pilgrims are particularly numerous. Chaucer undoubtedly aimed directly and particularly at the leading corruptions of the Church at that time, and yet he has, with consummate skill, introduced, among other characters, the Doctour and the Practice of Phisik.

Chaucer lived in a period of remarkable literary activity, and, while there may in some places be difficulty in translating his writings, by the average student he is as easily and clearly understood as Spencer or Shakespeare, and he may be read at any time without the aid of a glossary or grammar. Some acquaintance with Chaucer's allusions and his descriptions must of necessity be of a general value to the student of medicine, as well as to the student of literature.

But recently an opportunity occurred to urge a more extended study of medical history, the subject matter of this paper being a plea for a better knowledge of the leading facts and theories pertaining to our profession. While the present paper is not directly concerned with medical history, it calls attention to Chaucer's brief allusion to the "Doctour," and it may enable us to secure a more comprehensive view of the prevailing idea of the practice of medicine in vogue during his period.

From the Prologue (Morris), p. 13, the following pleasing description is taken.

With us ther was a Doctour of Phisik,
In all this world ne was ther non him lyk
To speke of phisik and of surgerye;
For he was grounded in astronomye.
He kept his pacient wonderly wel
In howres by his magik naturel.
Wel cowde he fortunen the ascendent
Of nis ymages for his pacient.
He knew the cause of every maladye,
Were it of hoot or colde or moiste or drye,
And where engendered and of what humour;
He was a verrey perfight practisour,
The cause I-know and of his harm the roote
Anon he yaf the syke man his boote.
Ful redy hadde he his apotecaries,
To sende him dragges, and his lectuaries,
For ech of hem made other for to wynne;
Here frendschipe has not newe to begynne.
Wel knew he the olde Esculapius,
And Deiscorides and Eek Rufus;
Old Ypooras, Haly and Galien;
Serapyon, Razis and Avycen;
Avernosf Damascien and Constantyn;
Bernard, and Gatesden and Gilbertyn.
Of his diet mesurable was he,
For it was of no superfluite,
But of gret norsching and digestible.
His studie was but litel on the Bible.
In sangwin and in pers he clad was al,
Lined with taffata and with sendal.
And yit he was but esy of dispence;
He kepte that he wan in penstilence.
For gold in phisik is a cordial,
Therefore he lovede gold in special."

Search where we may, in ancient or in modern literature, where shall we find anything that in simplicity of style, force of meaning, equals the above. It may be compared only to Polonius' advice to his son from the pen of the immortal Shakespeare. Not a line but that upon close study proves to be a gem in itself. Who can question its value to the "Doctour of Phisik" of to-day?

Chaucer's writings are not, as have often been supposed, those of a recluse—an indifferent, cold individual! He loved good company; he frequently met at the festive board. His very simplicity of expression gains for him an admiration that is spontaneous.

The clipping, taken from his original writings, will bear in some places interpretion and explanation.

In the first line is undoubtedly meant, "there was also a Doctour of Phisik."

He kepe his pacient wonderly wel—

In other words, he *watched* him and cared for him, as any doctor would naturally do.

It should be borne in mind that the *howres* alluded to in the text are the astrological hours. As a good and careful physician, he was particularly careful to be on the lookout for a favorable star in the *ascendent.* Of the medical science of the Middle Ages, a great deal was dependent upon astrological and very superstitious observances.

In many other places and in many other of his works, Chaucer alludes to *magik naturel*—practically the same allusion used in the present connect-

ion. In "The House of Fame" (p. 169—180) he uses the same term.

Of the humours mentioned, it is generally admitted that there were four—hot, cold, dry and moist! In a similar manner, Milton alludes to the four humors in his "Paradise Lost," II, 878.

Anon he yaf the sick man his *boote*.

The word *boote* is here employed in the sense of *medicine*. The word originally meant, and in fact, originated with the word *beete*—to kindle, to light—the literal meaning to light, to rekindle, to repair. From the same source, by means of various interpretations and usages, we derive the English boot, booty, bootless, better, etc. How really interesting to trace the derivations of the various words, even in a single paragraph.

Again, there is another most interesting word—interesting particularly to the physician; this is the word *dragges*. We find this by comparison that in one text it appears as *dragges*, in another it is written *drogges*. Yet, strange as it may seem, dragges is admitted to be the correct interpretation. In the French literature of to-day, familiar to every physician, we find the word dragee as a sort of a digestive powder for weak stomachs.

Then, as to the authorities mentioned by the author we find many—those who wrote the leading medical text-books of the Middle Ages. Rufus was a Greek physician of Ephesus. Haly, Serapyon and Avycen were Arabian physicians and astronomers of the eleventh century. Razis was a Spanish Arab of the tenth century, while Avrn r os was a Moorish scholar of Morocco. Johesnes Damaocenius was likewise an Arabian physician, though of an earlier date. Constantius Afer lived at the end of the eleventh century. Bernardius Gordomus was a professor of medicine at Montpellier, and was no doubt Chaucer's contemporary. Of the others mentioned in this connection, all were physicians of the fourteenth century.

"Esy of dispense," literally translated means what should be a still more valuable and practical lesson to those of the present day, and it is simply "moderate in his expenditures"—a fault of which too few of us may be charged as being guilty.

An allusion is clearly made to the great pestilence in 1348–1349, as the same allusion is made in "Piers the Plowman," under the expression *wan* or *woon*.

Translating the word *for*, we have *because seeing that* gold in phisik is a cordial, therefore he loved gold in special.

And so on for hundreds of lines this author goes on describing in his charming, simple manner all classes of people. Where in the English language can there be words brief, condensed, concisely arranged and as pointed as these few lines from Chaucer describing the "Doctour of Phisik." Every line is in itself replete, complete. It is veritably a sermon of itself. Yet how really few of us have ever given it the time to even read it, let alone properly interpret it.

Neither last in importance nor least for consideration, he states:

For gold in phisik is a cordial
Therefore he lovede gold in special."

Leaving out of consideration the remainder of his work, forgetting all the beauties that lie hidden in the following pages, what physician is there that, picking up his work and reading the few lines here given, could but see the genius and power of the poet so clearly expressed.

In the Prologue, the poet has taken the happy April season and commences his narrative with a description of the person and characters of each member of the party, and all, even to the Doctour, is done ample justice.

It would seem that for purity of thought, beauty of expression and richness of old English, Chaucer is an author too much neglected by the student of medicine and general literature, as well. There is no one that would not be benefited in every way by reading the Prologue, Knightes' Tale and Nonne Prestes Tale from the "Canterbury Tales."

To those familiar with the works, no more need be said; to those unfamiliar, the suggestions are made, merely as a hint to search the choice gems that have been, handed down for hundreds of years.—Chas. H. Mirz, A. M., M. D., in *Cin. Lancet-Clinic*.

LEUCORRHÆA: ITS CAUSES, VARIETIES AND TREATMENT.

The subject of leucorrhœa is one deserving of fuller consideration than is generally accorded to it. In a large proportion of instances the symptom that first directs attention to the ordinary forms of gynæcological disease is some abnormal mucoid exudation from the genital canal. Such symptomatic discharges are frequently so prominent a feature of those cases, or are so obscure in their causation, so intractable in their treatment, or so far-reaching in their consequences, as to occasion many of the diagnostic thereapeutic difficulties encountered in this special branch of practice. It may, therefore, not be useless to review, from the standpoint of a somewhat long clinical experience, our knowledge of the general pathology of leucorrhœal complaints, their various forms, their common course, possible results, and the methods available for their treatment. In this connection no special reference need be made to those mere hypersecretions from the genital muscosa that, irrespectively of any pathological condition, may be physiologically occasioned by the local hyperæmia normally consequent on ovulation or pregnancy, or by

the menopause. The term leucorrhœa should therefore be restricted to such non-hæmorrhagic or mucoid discharges from any portion of the genital lining membrane as contain morphological or other elements foreign to healthy mucus, and that are of pathological significance.

Vulvar Leucorrhœa.—This, according to the writer's observation in the Children's Hospital, Dublin, with which he had been connected for twenty-three years, is most frequently brought under notice in pediatric practice, and more usually is of constitutional or strumous origin, although it also not unfrequently arises from topical causes, whether catarrhal or simple inflammatory traumatic or specifically infective, such as gonorrhœa From whichever of these causes vulvar leucorrhœal discharges may arise, it too often happens that they are ignored, or not submitted to proper treatment in their early stages. The frequent result of this is the ultimate extension of the complaint to the uterus or its appendages, and hence in after years in numberless instances cases of dysmenorrhœa, sterility, endo-uterine, and tubal disease are brought under gynæcological treatment that might have been obviated by due attention to the leurocorrhœal troubles of early life.

Vaginal lercorrhœa may be ascribable either to any of the local exciting causes of genital hyperæmia, or to any abnormal constitutional condition by which the tonicity of the vaginal vessels is so impaired as to give rise to non-hæmorrhagic exudation therefrom. The most common of the former causes are catarrhal and simple inflammatory vaginitis; and next in frequency is gonorrhœal infection. The distinction between these is generally a matter of difficulty, or is often an impossibility in actual practice, and in many instances we must rely more on the history, symptoms, and probabilities of the case than on any differentiation from the readily ascertainable presence or absence of gonococci in the discharge. Whether specifically infective or not, however, the treatment of these cases is practically identical. In either instance our primary object should be to secure, as far as possible, the asepsis of the affected parts by the free use of warm antiseptic injections, such as lysol or boric acid (1 in 25), or corrosive sublimate (1 in 2000), so as to sterilize and cleanse the vaginal surface from the discharge which, even if not specifically inefective, if allowed to accumulate or decompose, must act as a direct source of irritation, as well as a possible *nidus* for pathogenic microorganisms by which the entire genital tract may be infected. In the second place, the same indications may be carried out most effectually immediately after each douching by vaginal insufflations of loretin, salol, or boric acid powder, or so-called "dry treatment." And thirdly, the parts in the intervals between these applications should be well separated by strips of antiseptic gauze saturated with dilute liquor plumbi, or with hazeline, the patient in the meanwhile being restricted to bed, and placed on such constitutional treatment as may be indicated in each case.

Vaginal as well as uterine leucorrhœa may, moreover, also occur, irrespectively of any recognizable local cause of irritation or hyperæmia, as the result of anæmia, chlorosis, strumous diathesis, and other general constitutional conditions, or as a direct consequence of arrested menstruation, lactation, or as a distant metastasis of gouty and rheumatic disorders, etc. In this connection the vaginal leucorrhœa of pregnancy may also be mentioned, as, although commonly it should be regarded as a physiological consequence or symptom rather than a disease of pregnancy, in some instances it assumes a more serious form, and in the latter months often give rise to most distressing pruritus of the pudendum. For the relief of this the writer would again suggest the local application of the methylene blue lotion, which he has recently recommended as one of the best of all topical analgesics in pruritic affections generally.

Cervical leucorrhœa is very frequently of special importance in connection with the causation of obstructive dysmenorrhœa and sterility, in which cases the cervical canal may be so sealed by an abnormally viscid and hyper-alkaline exudation from the Nabothian follicles and cervical endometrium as to interpose mechanical obstacles to either menstruation or conception. In our local treatment of such cases, therefore, our chief reliance should be placed on the free use of the cervical curette, before which the writer recommends the thorough dilatation of the canal by means of his rapid dilator, and then, immediately after curetting, applies iodized phenol or salol bougies to the affected surfaces. Lastly, in this, as in all other forms of chronic leucorrhœa, it is most essential that whatever topical measures are found necessary should be conjoined with these general remedies, which may be specially indicated by the constitutional state of the patient, by which such discharges are often occasioned, or to which, still more frequently, their continuance is due. In many instances of this kind a mild course of bichloride of mercury given in tincture of bark is especially serviceable. In the greater number of cases, however, chronic leucorrhœa is essentially a disease of debility, and, for its curative treatment, requires the exhibition of ferruginous tonics, as well as rest, general and local, together with suitable hygienic and dietetic measures. For a complaint so many sided in its etiology as this, it is needless to observe that there can be no special remedy. Nevertheless, in a large proportion of instances, the writer has derived more distinctly beneficial results from the long-continued employment, in small doses, of arsencial preparations or combinations such as Donovan's solution, than

any other class of medicine employed in the constitutional treatment of chronic leucorrhœal cases generally.—Abstract of paper by T. M. Madded, M.D., in *The Medical Times And Hospital Gazette.*

COLITIS.

Two correspondents have recently written to *The Lancet* asking for information on the subject of colitis. As I have seen several cases of it both during life and in the post-mortem room, and have recently collected a number from the post-mortem records of Guy's Hospital and various publications, I thought it might serve a useful purpose if I briefly drew attention to the chief varieties. Much fuller details will be given under the heading "Diseases of the Colon" in the "System of Medicine" about to be published under the editorship of Professor Allbutt. The colon is affected by a number of well understood diseases, as dysentery, tuberculosis, cancer, and anthrax, and in the post-mortem room many other extremely interesting conditions—as, for instance, follicular and distension ulcers and the forms of colitis associated with pyæmia, Bright's disease, etc.—are seen; but, apart from all these, there appear to be three forms of colitis of clinical interest, which may be termed "simple colitis," "membranous colitis," and "ulcerative colitis."

1. *Simple colitis.*—The chief symptom of this is diarrhœa. The motions contain much mucus and usually small, but sometimes large, quantities of blood, which is fluid and but little altered, having clearly come from low down in the bowel. Under the microscope unaltered red blood cells, some leucocytes, and triple phosphate crystals may be seen. Early in the case there is usually very little fæcal matter. The onset is generally sudden; the bowels may be open many times a day, and in most cases there is some abdominal pain (for the most part along the course of the colon), especially during defecation, but it is not often excruciating, nor is tenesmus very marked. Abdominal tenderness is nearly always present, chiefly over the sigmoid flexure, but it may be over the whole colon or the whole abdomen. The rectum may feel a little rough, and may be injected and covered with mucus; the tongue is covered with a white fur, but is commonly free at the edges and tip. If the case is severe the temperature is raised, and if the diarrhœa continues the patient loses weight. Flatulency, abdominal distension, loss of appetite, nausea, and vomiting may all be present, but are not commonly very striking. There is nothing noteworthy about the pulse, for its characters are the same as are usually observed in any severe abdominal disease. The cases vary much in severity, and if untreated may drag on for some time, even proving fatal. The patients are often of a depressed, hypochondriacal turn of mind. The most important part of the treatment is to put the patient to bed, to keep him warm, and to give him only small quantites of milk at frequent intervals. Opium, bismuth, and compound catechu powders are valuable for checking the diarrhœa, but directly it appears that this is about to cease astringents should be withheld, for the subsequent constipation is often very troublesome. It is best overcome by rectal injections of glycerine or warm olive oil. The hæmorrhage is rarely severe enough to call for special treatment; probably injections of equal parts of water and liquor ferri perchloridi thrown as high up the rectum as possible are the best remedy. Milk or at the most farinaceous diet and complete rest in bed must be continued till all the symptoms have disappeared, and the longer the case has been left untreated the longer will the treatment last. If the patient die, the mucous membrane of the colon will be found to be injected, red, or even livid; the submucous tissue is swollen; an excess of mucus can be seen on the surface; and there may, in an exceptionally severe case, be a few flakes of lymph or a few minute quite superficial ulcers.

2. *Membranous colitis.*—In this disease the patient passes from the rectum whitish membranous casts of the bowel. The subjects of it are mostly women over twenty years of age; they are poor eaters, and the tongue is slightly covered with a white fur. Usually they are of a depressed melancholy turn of mind, and appear to get very little enjoyment out of life. This description applies in a well-marked case to the habitual state of health, but from time to time there are exacerbatione during which all these symptoms become more severe, and in addition there is much griping pain in the abdomen, commonly in the course of the colon, and for the most part bearing no relation to food, and there may be nausea or even actual vomiting. After this state of things has gone on for a few days the patient begins to pass membranes and often blood from the bowel; this is not clotted, and has clearly come from low down. The membranes, which some patients call "skins" and others compare to pieces of tapeworm, are greyish or yellowish white, of sufficient consistency to remain intact when held up, and they vary from being very thin to about an eighth of an inch thick. A good specimen forms a complete cast of the colon, with perhaps some fæcal matter in its interior, and may be more than a foot long; but often only shreds, which are clearly fragments of larger pieces, are present, and these may have been rolled up into a tight ball by the movements of the colon. Under the microscope the membranes are seen to be structureless and somewhat transparent, with embedded in them, a few minute pieces of undigested food, fæcal matter and some crystals, chiefly triple phosphate.

Fatty epitheliel cells may also be seen, clearly suggesting by their collection together and their arrangement that they are the cast-off cells of Lieberkühn's follicles; and the inner surface of the membrane is marked by a number of pits which correspond to the mouths of these follicles. Several leucocytes may also be seen. Chemically, these membranes are albuminous. The duration of an exacerbation during which membranes are passed may be only a few days, or they may continue to be passed for several years. Some motions contain fæcal matter, blood, and membrane; others contain only one or two of these three constituents. The fæcal matter is usually in the form of hard scybala, and constipation is more common than diarrhœa. I have seen one fatal case. No membranes had been passed for some time before death, and the colon was thin and marked with slight patches of congestion. Otherwise the whole body was normal. Treatment is very unsatisfactory. No drugs are known to have any certain effect for good. The body and mind must be maintained in the best general health possible. The patient should take plenty of outdoor exercise of such a nature as to occupy her mind as well as her body. Her diet should be abundant and simple, but at the same time carefully prepared, so as to tempt her to eat, Often the patient imagines she cannot eat this and that, and so she becomes very fastidious. A firm attempt to break this habit must be made. She should have some definite employment to occupy her mind, and when not at work should associate with cheerful companions rather than be left alone. Purgatives are particularly to be avoided. Every attempt must be made to get the bowels to act regularly, and the patient should go to the watercloset every morning whether or not she thinks the bowels will be moved. Her meals should be regular and she should go to bed early. If the pain or diarrhœa is at all severe she had better remain in bed, and some astringent —as bismuth—may be necessary. Opiates may be required for the pain, but they should be given sparingly, lest the patient become a confirmed opium or morphia taker, and all astringents should be ordered in small quanties because of the subsequent constipation. This is best overcome by a rectal injection of warm oil or glycerine. It has been suggested that in a very intractable case it might be justifiable to open the colon high up, and by allowing the fæces for some time to pass out through the artfiicial anus, to give it rest, and at the same time to flush it from the artificial opening to the natural anus with boracic acid lotion.

3. *Ulcerative colitis.*—This disease is about equally common in the two sexes, and the sufferers from it are usually between twenty and fifty years of age. It is ushered in by frequent attacks of pain, usually paroxysmal, severe, griping, and referred to the front of the abdomen. Between the attacks, of which there may be several in a day, there may be a slight dull pain, or even none at all. Severe diarrhœa is another early and constant symptom, and the bowels may be open five or six or more times a day. The act of defecation is accompanied by much abdominal pain, but marked tenesmus is rare. The motions are fluid, sliny, and foul smelling; usually some fluid blood—it may even be a large quantity—is present, and a few small lumps of fæces may be seen. Mucus is never present in large quantities. There may be some shreddy-looking material, very like sloughs. For a day or two between the periods of diarrhœa there may be periods of constipation, during which more solid motions are passed. Many patients, before they have been admitted to the hospital, have suffered from vomiting, but this usually ceases under dieting and careful rest. The tongue is covered with a dirty whitish fur; as the disease progresses it becomes red and dry, with a brown fur. The patient has the pinched expression often seen in abdominal disease, he is extremely anæmic, his abdomen is somwhat distended, peristaltic movements may be visible, and ulceration may occasionally be felt per rectum. As the case goes on the anæmia and weakness progress, the patient looks extremely ill, and his pulse is feeble. Generally there is irregular pyrexia during the whole of the attack, the temperature commonly ranging between 100° and 102° F. The prognosis is extremely grave—in fact, we have no convincing evidence that the disease is recoverable. The duration is usually less than eight weeks; the commonest cause of death is exhaustion, but some patients succumb directly to perforation. In this country acute dysentery is so rare that there is not likely to be much contusion between it and ulcerative colitis. The different character of the stools and prominence of tenesmus, the burning pains within the anus, and the very frequent evacuation of the bowels in dysentery would help to establish the diagnosis. The diseases that I have known to be confounded with ulcerative colitis have been phthisis, malignant disease of the colon, intestinal obstruction, and pernicious anæmia. Post-mortem examination of many cases shows that in a typical example the muscular coat is exposed by ulceration, which is often so extensive that only islets of mucous membrane are left here and there. These are often considerably swollen, and consequently they look taller than they otherwise would, and frequently they are more or less sessile because of the ulceration that undermines them. The result is that a careless observer concludes that the colon is covered with polypi. The ulcers may be very numerous, and they may run together to form large, irregular ulcerated areas, with here and there perhaps a sloughy floor. The vessels are usually dilated; it is rare to see any attempt at healing. If the

patient die early in the course of the disease the ulcers may be superficial and the mucous membrane very soft and congested. Sometimes the small intestine is affected as well as the colon, but to a less extent. Histologically the process is the same as is usually seen in chronic ulcerations. About half of the patients who die from ulcerative colitis show no disease except that of the intestine. The associated diseases which in any way suggest a special connexion are Bright's disease, gout, and hepatic abscess. Among twenty-three cases of ulcerative colitis of which I have notes of the condition of kidney, chronic interstitial nephritis was present in six, and of the remaining seventeen two had urate of soda in their joints. The association with suppuration of the liver is very rare, but probably there are two distinct varieties of it, as there are of hepatic abscesses in association with dysentery—namely, the small multiple pyæmic abscess and the large solitary abscess. Treatment, unfortunately, appears to have very little effect on the disease. Absolute rest in bed, with slop diet and opium, and hot fomentations, if the pain and diarrhœa are very severe, probably afford the best chance, but the prognosis is exceedingly grave. Several cases will be found recorded in the Guy's Hospital Reports, and one showing the association with hepatic abscess—W. Hale White, M.D., F. R.C.P., Lond., in *The Lancet.*

HEALTH COMMANDMENTS.

1. Thou shalt have no other food than at meal time.

2. Thou shalt not make any pies, or put into the pastry the likeness of anything that is in the heavens above or in the earth below. Thou shalt not fail to chew it or digest it, for dyspepsia shall be visited upon the children to the third generation of them that eat pie, and long life and vigor upon those that live prudently and keep the laws of health.

3. Remember thy bread to bake it well, for he will not be kept sound that eateth his bread as dough.

4. Thou shalt not indulge sorrow or borrow anxiety in vain.

5. Six days shalt thou wash and keep thyself clean, and the seventh day thou shalt take a great bath, thou and thy son, thy daughter, and thy maidservant, and the stranger that is within thy gates. For in six days man sweats and gathers filth and bacteria enough for disease; whereupon the Lord has blessed the bath-tub and hallowed it.

6. Remember thy sitting room and bed chamber to keep them well ventilated, that thy days may be long in the land.

7. Thou shalt not eat hot biscuit—wait.

8. Thou shalt not eat thy meat fried.

9. Thou shalt not eat thy food unchewed, or highly spiced, or just before work or just after it.

10. Thou shalt not keep late hours in thy neighbor's house, nor with thy neighbor's wife, nor man servant, nor his maid servant, nor his cards, nor his glass, nor with anything that is thy neighbor's. Thus endeth the tenth commandment.—*Med. Brief.*

ZINC STERATE IN THE TREATMENT OF ATROPHIC RHINITIS.—The author, Dr. Joseph F. Gibb, discusses the nature and general management of atrophic rhinitis, and concludes by outlining the treatment pursued at the Episcopal Hospital of Philadelphia, and the results obtained in fifty four carefully selected cases. The plan of treatment consisted of cleansing sprays, followed by stimulating applications, as usually recommended in the management of atrophic troubles. The cleansing was accomplished by spraying the nostrils with an antiseptic detergent solution (Dobell's Solution), followed by applications of a hydrogen peroxide on a cotton wrapped probe if the inspissated crusts were not otherwise removed. After the membranes were entirely free from secretions they were coated with a thin layer of powdered sterate of zinc containing 25 per cent. of europhen applied by means of a powder-blower.

Stearate of zinc has an oily feel when handled and has a peculiarly strong adhesiveness to mucous surfaces, thus exerting an influence for a prolonged period when applied to them surfaces. The drug produces no unpleasant effect when used in the nose, and nearly all patients claim that its use is very agreeable. Very satisfactory results were obtained in the cases treated at the Episcopal Hospital, three or four treatments in some instances being sufficient to eliminate the disagreeable odor as well as the formation of scabs. The patients were treated twice per week, and in the interval between treatments were instructed to use a cleansing solution made from Seiler's Tablets. In a total of thirty-two cases of atrophic rhinitis that remained under observation until discharged, the shortest time being two months, the longest eighteen months, there were twenty-seven in which there was a complete disappearance of crusts and odor. The author concludes by recommending stearate of zinc as a base for carrying stimulating applications, because of its simplicity of application, its effectiveness in relieving the distressing symptoms, and the comfort that it seems to induce.—*Med. and Surg. Rep*

LEUCORRHŒA IN YOUNG UNMARRIED WOMEN.—In the treatment of leucorrhœa in young unmarried women, instances frequently occur in which the usual practice of making an examination to ascertain the condition of the pelvic viscera is so

obnoxious to the patient, or is so firmly opposed, that the physician is forced to abandon it, and have recourse to medicine.

In such cases, Dr. Slocum has learned to depend upon the specific action which cantharides appears to exercise upon the cells constituting the genital as well as the urinary system. It is probably by direct stimulation of the cell just to the point of successful resistance that the benefit is secured, as the dose is very small. Strangury, or other unpleasant symptom, has not been produced. The action of the drug has been so uniformly satisfactory that when it fails, such result forms a strong basis for suspecting the presence of something more than simple hyperemia, or mild inflammation. Lessening of the discharge is sometimes noted within five days, but in several cases of profuse discharge of four years' and longer duration, the treatment was not successful until after a month's persistent use.

The formula which has seemed the best, contains also the tincture of ferric chloride and dilute phosphoric acid. These, though probably modifying the action of the cantharides, are only adjuvants. Following is the usual form of administration:

℞—Tr. cantharides . . . . ♏ 96
Tr. ferric chlorid. . . . " 160
Dilute phosphoric acid . . " 160
Syr. lemon. . . . . ℥ ij.
Aqua . . . . . ℥ iv.

M. Dose.—One teaspoonful in water after meals.—*Lancet-Clinic.*

RECIPES FOR BECOMING A MEDICAL PROFESSOR —To be rich, well connected, and have relatives among hospital and college trustees is a very good mental equipment. Have a friend who is wealthy and endows a chair for you. In Germany, be a son-in-law of a leading professor. But lately I read of the death of a German privat-docent at at the ripe age of seventy-four, whom I knew when was already a privat docent, but who proved his incapacity for advancement by refusing to marry the daughter of the full chair. Write a text book while you are young and fresh. There are so many, that you can extract half a dozen and make the seventh with the aid of very little brains and much more posteriora. Operate on two alleged lacerations daily, and let no more than fifty per cent. die of septicæmia. Prove that the best place for ovaries is in a jar. Parody the great Philadelphian who makes a diagnosis before he cuts babies skulls by sawing without diagnosis. The latter is seen and heard of, the former is not. On that line there are many possibilities. Thirty years ago I was offered the place of professor of the diseases of children. I replied I could not think of accepting; I did not know enough. My friend, who was a professor, and knew all about it, laughed and replied if he were offered a chair of nautics he would begin lecturing to-morrow. That, gentlemen, is how I became a professor of pædiatrics—only because there was no place vacant for a Columbus.—Prof. Jacobi in *Sanitary Era.*

A NEW AND SPEEDY METHOD OF DILATING A RIGID OS IN PARTURITION.—(*Amer. Jour. of Obstet.*) Dr. Farrer related two cases of rigid os, in one of which, after endeavoring vainly to relax the cervix by the aid of chloral, bromide of potassium, and morphia, followed by most persevering attempts at digital and mechanical dilatation, with and without chloroform, he applied a ten per cent. solution of cocaine preparatory to incising the edge of the os. After five minutes, on introducing the finger as a guide to the scissors, the os was found widely dilated. In the second case, which, like the first, was that of a primipara (age 48), where no dilatation occurred, although the same means as were tried in the first case were used, he waited three days and then applied the cocaine. In four minutes the os was found to have yielded. He considered the dilatation to be due to the cocaine in both cases.

IMPACTED FISH BONES.—The difficulty of removing fish bones and similar obstructions, impacted at the lower end of the œsophagus, is well known, and various mechanical measures and appliances have been invented to deal with the difficulty. One of the most simple, however, and it reported one of the most effectual, in the case of impaction of such foreign bodies, is to administer to the patient a pint of milk, and forty minutes afterward an emetic of sulphate of zinc. The fluid easily passes the obstruction, and is, of course, rapidly coagulated in the stomach into a more or less solid mass, which, on being ejected, forces the obstruction before it, and so effects its removal.—*Med. Times.*

PURULENT INFECTION IN THE LYING-IN PERIOD. —Intra-uterine injections of iodine; if the temperature does not fall, curetting, or at first simple swabbing out of the uterus. As much nourishment as possible, with alcoholic drinks. Quinine, 15 grs. in two doses, morning and evening, increasing to 1.50 grammes (23 grains), but not exceeding 31 grs. in twenty-four hours. Cold ablutions; wet cloths on the head, stomach and thighs; wet packs, or cold baths. When temperature exceeds 101.4 degrees F. no cold baths.—Professor Tarnier, in *Med. T. and H. G.*

A GOOD EXAMPLE.—The City of Sydney, Australia, says the *Boston Med. and Surg. Jour.*, has imposed a fine of one pound sterling upon any person convicted of spitting upon the floor of public buildings or upon the street.

THE CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News.

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TORONTO, MAY, 1895.

Editorial.

PHYSICAL CULTURE FOR YOUNG GIRLS.

It goes without saying that young girls are suffering very greatly from the lack of physical culture, physical exercise. A half century ago, if we can trust to the literature of the time, we would have seldom met a girl in her years of development who suffered from disturbed menstrual function, dysmenorrhœa, amenorrhœa, menorrhagia, etc. Such were exceedingly rare. Girls commenced to menstruate, usually late, and continued without the slightest disturbance or apprehension. Now we are continually confronted with amenorrhœa or dysmenorrhœa, and young girls are put under treatment early in life. Emmenagogues innumerable are utilized without much benefit. Many of these drugs, such as ergot, viburnum, hydrastis, aloes and the like, which often give temporary relief, are of very little permanent benefit. Girls are constantly taken to the physician for treatment, and temporary relief usually is obtained, which stops the anguish and trouble for a month or so. Constipation is relieved, digestion is improved, habits are corrected, but a permanent relief is lacking. This is particularly true in daughters of families who are in good circumstances. What is the trouble, and what is the remedy? We think the trouble is easily diagnosed. They have not had the benefit of physical labor and outdoor exercise. They have been kept in the parlor, at school, or in society since they were eight or ten years of age. The mental training has been entirely out of proportion to physical labor. Their parents have been too anxious to show how skilled they are in the use of the piano, violin, guitar, etc. They are kept daily at their mental toil until they are twelve or fourteen years of age, when they are prepared for society, practically cultured under the modern rule. They are hence beautiful bundles of nerves, physical wrecks, but perfect ladies under the common acceptation of the term. At sixteen they are in a state of physical decay.

This picture may be considered overdrawn, but compare, if you will, the girl of to-day with the girl of fifty years ago, who had enjoyed all the exuberance of physical life, who had been allowed to romp as a child until she was sixteen years of age, out of doors and in. In other words, the girl had led a "go-as-you-please" life, so far as physical exercise is concerned—a regular tomboy, if you please. Such girls were, in fact, physically and mentally perfect, and reached the age of womanhood without even any knowledge of it, and passed through life as they should, in comparatively perfect health.

We have what we call educators in physical culture, we have massage, so called, and we have everything at our hand, in large cities, especially, to accomplish apparently what was accomplished in the girl of a half century ago; but it will not work in practice while it is all apparently very nice in theory.

What change should we advise in our mode of caring for the present generation of young girls? There is but one way out of the difficulty, which is to habituate the young girls to all the exercises of the boys, such as baseball, football, boxing gloves, foot-racing, jumping, gymnastic exercises, thus relieving them of every restraint practiced to-day. Remove corsets and keep the girls out of so-called society, out of the parlor and away from the piano until they are fairly well developed, discard medicine for physical exercise and physical labor, and we will have a more perfect young lady. Regularly prescribed physical training is a failure to a great degree. What is needed is more freedom of enjoyment and exercise, more play and less restrained exercise.

MILK, BOILED OR UNBOILED.

The heated term will soon be upon us, with its usual crop of infantile troubles. As these chiefly have to do with the alimentary tract, and as either poor quality of food, or injudicious feeding is responsible in the great majority of cases for the lighting up of the trouble, the question of the milk supplied as food, is a most important one. It would be supposed that experience would have taught mankind whether cooked or uncooked milk is best as a food; but this we find is not the case. Science is called upon to show which is preferable, and even scientific men, who have undertaken the investigation of this subject, fraught with importance to so large a proportion of the infantile population, have not been unanimous in their findings. Some say that Mother Nature knows what she is about, and that the article as it flows from Nature's font is assuredly the best. So it is for the calf, colt, lamb, or infant, if it sucks its own mother; but when that is not possible, and cow's milk has to be used for the young of the human species then practical and everyday experience shows that when boiled it is not only more easily digested, but that it has a nutritive value quite equal to the raw article.

Experiments undertaken by Dr. C. Chamouin, first with kittens and afterwards with infants, showed after exhaustive and repeated trials that the kittens fed on boiled milk were "twice again as fat" as those supplied with the raw milk; and that the boiling of milk is the means of preventing the loss of innumerable lives by gastro-intestinal disease.

We hear much of the sterilization of milk, and various more or less cumbrous processes have been suggested for the purpose. While, however, such processes are easily carried out in laboratories and institutions properly equipped for such operations, the trouble is to get it done in the ordinary household, with the ordinary means and intelligence at hand. Now, milk boiled *properly* is certainly sterile, so far as infectious disease germs are concerned.

Not only so, but it is more easily digested and agrees with a far greater percentage of cases than does unboiled milk. There is ample authority for the above view of the case, but certain points must be attended to, else the results will not be so favorable. Firstly, all the vessels in which the milk is carried, boiled, and afterwards kept must be *scrupulously clean*. Nothing else but absolute freedom from dirt will suffice. Then it should never be boiled in an open vessel. This should have a close cover.

Lastly, it need not be kept at 212° F. for more than 20 minutes. This is sufficient to sterilize and cook it, and no further boiling is necessary.

In instructions issued by the chief of the Bureau of Animal Industries at Washington, regarding sterilization of milk, the nurse is warned not to allow the temperature to exceed 155° F. It is asserted that if it exceed 155° F. "the taste and quality of the milk are likely to be adversely affected." While not wishing to detract from the importance of these instructions, we say again that in ordinary every day practice from house to house, they will not be carried out, and we shall have better results if our orders are such as may always be obeyed. Therefore the simple boiled milk must, we think, for the present at any rate, take the place of the sterilized or Pasteurized product.

DANGERS IN THE USE OF ANTITOXINE.

While the use of antitoxine has come into vogue on every hand in the treatment of diphtheria, it is not without its sturdy opponents, who claim that the cases which recover, do so in spite of the so-called "specific treatment."

Dr. J. T. Armstrong, of New York, brings several objections to its use, and quotes good authority.

In a paper (*Archives de Méd. Exp.*, 1892) Dr. G. Daremberg stated that his experiments showed that, while the serum of an animal of one species did not destroy the red corpuscles of an animal of the same species, it rapidly proved destructive to those of a different species. If warmed to from 122° to 140° F., or exposed to the light for several days, the serum lost this globulicidal power.

G. Hayem, in his monograph on "The Blood," states that the serum of the ox more or less profoundly changes the blood of the dog, producing in it small emboli that may involve the functions of organs, or even life itself. Microscopically,

these emboli consist of degenerated elements of the blood. He specifically states that horse's serum produces phenomena similar to those caused by ox's serum. He further states that the urine is habitually suppressed and the kidneys are congested.

The tendency of an alien serum to produce emboli has also been noted by C. Lazet (*La France Méd.*, 1891), who found that if the serum of a dog was mixed with the blood of a man, or *vice versa*, there were produced more or less pronounced alterations, and solid concretions were formed from the changed elements.

J. T. Armstrong, of New York, believes that it was this tendency of alien serum to form emboli that caused the death of at least one patient in Brooklyn, and draws attention to the fact that the toxic influence of serum, *per se*, explains all the unusual and untoward symptoms that have been observed in diphtheria patients treated by antitoxine serum.

The *post-mortem* lesions found in the five-year old child whose clinical history is reported in the *British Medical Journal* for March 30th, correspond throughout with those observed by Hayem in dogs that died from the effects of alien serum injections.

Empiricism that has bacteriology as its sole foundation is as condemnable as any other form of that cult, and, as prognosis is not yet a lost art, it seems absurd to use antitoxine in every case where a patient's nasal or faucial secretions contain questionable micro-organisms. There are many recorded instances of these bacilli (Klebs Loeffler) being found in perfectly healthy persons, and there are not wanting authenticated histories of cases where the bacillus was absent, although the disease ran a typical course, even to the subsequent paralysis.

TRINITY MEDICAL ALUMNI ASSOCIATION.

Convocation Hall, Trinity University, was the scene of the first part of the third annual meeting of Trinity Alumni Association, where on Thursday, April 4th, a large number of graduates and undergraduates of old Trinity, as well as a goodly number of invited guests, gathered to listen to papers by Professor Roswell Park, of Buffalo, Professor A. H. Ferguson, of Chicago, Dr. Daniel Clark and Dr. Chas. Sheard, of Toronto, and Dr. Joseph Price, of Philadelphia.

These papers, with the exception of that of Dr. Park, will appear in our columns, and need not be further referred to in this place. Dr. Park's paper is a part of a work now in preparation, and cannot, therefore, be published out of its proper setting. The only regrettable thing in the whole of the proceedings was that the very interesting papers of Drs. Ferguson and Park were not discussed, owing to want of time. The whole *Seance* was a great success; old friends meeting and renewing their acquaintanceship, and, to judge from the "wreathed smiles"—on their faces, we mean—their youth, at the same time.

To the President, Dr. Geo. A. Bingham, of Toronto, as well as to his assistants, Trinity graduates owe a debt of gratitude for the energetic manner in which the affair was carried through, making it, as they did, the best, by far, of the meetings so far held.

In the evening a banquet was held at the Rossin House, to which over one hundred sat down. Speeches, burning with eloquence and loyalty to Trinity, were the order of the evening. The President of the Association was particularly felicitous in his remarks, and he was ably seconded by Dr. Geikie and Dr. Temple.

Another feature of the evening were short addresses by representatives of each year from 1873 down to the present. Dr. McKay, M.P.P., of Ingersoll, the new President of the Association, was the oldest representative present. We hope this organization, now so well and lustily started, may continue to grow, and extend its influence far and wide for the glory of Trinity.

MEDICAL EXAMINATIONS.

M'GILL UNIVERSITY.

Final Examination for M.D., C.M.—C. C. Alexander, Fredericton, N.B.; J. H. Allen, B.A., West Osgoode, Ont.; D. P. Anderson, B.A., New Liverpool, Que.; X. Lanthony, Berwick, N.S., J. W. Bailey, B.A., Northfield, Minn.; J. T. Basken, Dunrobin, Ont.; E. D. Beatty, Nepean, Que.; C. W. Bishop, Montreal; T. H. Blow, South Mountain, Ont.; R. B. Boucher, Peterboro', Ont.; C. W. Bouck, Inkerman, Ont.; H.

J. Chapman, Port Elgin, N.B.; M. E. Commins, B.A., St. Stephens, N.B.; W. Cowie, B.A., Montreal; A. Cruickshank, Inverness, Que.; J. L. Day, B.A., Montreal; W. L. Ellis, St. John, N.B., W. A. Feader, Iroquois, Ont.; J. W. Flynn, Montreal; C. H. Fox, Oxley, Ont.; C. J. St. Gallant, Charlottetown, P.E.I.; J. H. Gleason, Cowansville, Que.; J. P. Grant, New Glasgow, N.S.; A. Gun, Durham, Ont.; R. Hamilton, Bright, Ont.; J. L. Hargrave, B.A., Rosedale; R. Del Harwood, Vaudreuil, Que.; L. Hogg, B.A., London, Ont.; J. Hogle, Montreal; R. A. Kerry, Montreal; J. H. King, Chipman, N.B.; H. T. Knapp, B.A., Sackville, N.B.; M. Lanterman, Montreal; A. A. McLeay, B.A., Danville, Que.; G. F. May, Montreal; J. H. Merrick, Merrickville, Ont.; N. McKinnon, Parkhill; G. J. McNally, Upper Kingsclear, N.B.; R. W. Neil, Aylmer; W. Oliver, B.A., Rockburn; B. S. Price, King's County, N.B.; D. D. Quay, Port Hope; W. S. Reilly, Ottawa; J. E. Robertson, Morrisburg; E. H. Sanders, Woodstock; H. M. Shaw, Berwick; C. W. Vipond, Montreal; D. F. Walker, Huntingdon; J. H. Watson, Barbadoes; W. W. Wickham, Summerside, P.E.I.; J. A. Williams, Carleton Place; D. M. Wood, Kenmore; H. K. Wright, Montreal.

Honors, Medals, and Prizes.—The Holmes medal to William A. Feader, Iroquois, Ont.; the final prize to William G. Reilly, Ottawa, Ont.; the primary prize to Campbell B. Keenan, Ottawa, Ont.; the Sutherland medal to Campbell B. Keenan, Ottawa, Ont.; the Clemesha prize to William W. Wickham, Summerside, P.E.I.

TRINITY MEDICAL COLLEGE.

Final Fellowship Degree—Certificates of Honor; 75 per cent. and over on the total.

Candidates who obtained 75 per cent. and over.—Frederick Parker, Alex. C. Lambert, James C. Hutchison, Charles A Drummond, J. G. Lamont, Robert J. Walker, H. George Pickard, Henry McC. Featherstone. 70 per cent. and over.—Frederick C. Harris, Henry E. Tremayne, Malcolm McKinnon, Rowland T. S. Gilmore, George Elliott, John H. Ferguson, Vaux Francis Leonard, Robert Wm. Shaw, Joseph D. Monteith, Alexander McKay, Henry C. Pearson, T. H. Sneath. 60 per cent. and over.—Christopher G. Johnson, Frank S. Rounthwaite, Donald Albert Cameron, John A. Kerr, Frank McLennan, Daniel W. Shier, James D. McKay, David D. Duggan, Frederick W. Whiting, George W. Brown, Ira A. Tripp, John Albert Cook, Arthur A. Milligan. Passed.—Wm. James Burden, Wm. T. Clemes, George F. Pierce, Harry R. Pearce, C. Lambert, B. Stammers, Apollos F. Phillips, Hugh A. Stevenson, James R. Durham.

Dr. Sheard's prize in physiology for the first year, H. A. Johnston.

Scholarships.—First year: 1st, $50, E. Shoemaker; 2nd, $30, R. G. McConochie; 3rd, $20, H. A. Johnston. Second year: 1st, $50, J. S. McEachren; 2nd, $50, Geo. Cairnes.

Medals.—The Gold Medal, Frederick Parker. 1st Silver Medal, Alexander Lambert; 2nd, Jas. C. Hutchison,

TRINITY UNIVERSITY.

Final Examination for M.D., C.M.—Gold medal and certificates of honor—F. Parker.

Silver medal and certificate of honor—J. C. Hutchison.

Certificates of Honor.—J. G. Lamont, A. C. Lambert, F. L. Vaux, F. G. Wallbridge, F. W. Whiting, F. C. Harris.

The following are also in Class I.—J. H. Ratz, G. Elliott, Miss M. E. Allen and H. E. Tremayne, equal; J. D. Monteith, C. A. Drummond, D. W Shier, D. A. Cameron, and T. B. Hewson, equal; R. T. S. Gilmore, J. F. Battell.

Class II.—J. N. Hutchison and H. G. Pickard, equal; W. Brown and A. Mackay, equal; H. M. Featherstone, M. M. McKinnon, W. J. Burden, J. A. Cook, H. S. Krug, and R. W. Shaw, and T. H. Sneath, equal; F. McLennan, W. T. Clemes, J. A. Kerr, Miss M. Symmington, G. W. Brown, and J. H. Ferguson, equal; J. A. Trip, J. B. Leeson, and D. W. McPherson, equal: R. J. Walker, J. R. Durham, and H. Paine, equal; C. G. Johnson, and J. D. McKay, and H. E. Wallace, equal; H. C. Pearson, W. G. McKechnie.

Class III.—F. S. Rounthwaite, Miss E. Hurdon, D. D. Duggan, G. W. Hall, F. G. Grosett, and A. A. Milligan, and W. B. McKechnie, equal; H. A. Stevenson and J. Menzies, equal; J. W. Routledge, T. W. Kirby, Miss M. MacMillan and A. F. Phillips, and J. F. Drain, equal; J. W. Mehan, Miss D. Macklin, J. A. Malloy, A. W. Aiken, W. D. McNab, Miss R. Pringle.

In the primary the first silver medal was taken by J. S. McEachren, and the second by G. Cairns.

THE WOMEN'S MEDICAL COLLEGE.

Diplomas.—Misses M. E. Allen, Fordwich; E. Hurdon, Toronto; D. M. M. Macklin, Stratford; M. L. Macmillan, Toronto; R. Pringle, Fergus; M. P. Symington, Brighton.

Some of the students went up for Trinity College examinations, with the following results:

Degree of M.D.C.M.—Miss M. E. Allen, with first-class honors; Miss M. P. Symington, with second-class honors; Miss S. Hurdon, Miss D. M. M. Macklin, Miss Margaret L. Macmillan, Miss R. Pringle.

A Few Points in Obstetrics.—No branch of a physician's practice requires more self-poise, where so many complications arise, commanding our sympathy and demanding our skill, than that of obstetrics, and when disease and death follow a normal case of labor, the cause can be traced to none other than to ignorance or mismanagement, *Med. Rev.*

With these preliminary remarks, Ewing advances a few aphorisms relating to obstetrics.

1. Examine the urine a week or so before the expected confinement. Albumin need not cause alarm, unless present in large quantity, in which case the woman should be restricted to milk diet, given one-tenth grain of sulphate sparteine four times a day, and bowels kept open with cream of tartar, the object being, of course, to relieve congestion of the renal veins.

2. Make no digital examination without first cleansing the hands and nails, together with the external genitals, with a solution of bichloride of mercury (1 to 2,000) and ethereal soap.

3. Empty the rectum thoroughly with an injection of warm water.

4. Make as few examinations as possible during progress of labor, and each time dip the hand first in the antiseptic solution.

5. If the presenting part emerges slowly from the womb, do not allow your impatience to so get the better of your judgment as to induce you to "assist nature" by pulling upon the os. Probably all the deep pathological tears, calling for surgical interference, found on the right and upper anterior sides of the cervix, are caused by the finger of the accoucheur.

Conception.—The menstrual cycle, if it may be so termed, consisting of 28 days, usually, and embracing time of menstrual flux and intervening days, may be divided into two periods, viz., a genetic and an agenetic period. *Med. Brief.* The genetic period embraces the first 18 days of the menstrual cycle. During this period conception is most likely to occur. If conception occurs within the first third of this period, the parental vigor being equal or nearly so, the child will be a girl; but if conception occurs within the last third the child will be a boy. Within the second third, the earlier or later the period in which conception occurs will govern the sex approximately. The agenetic period embraces from the 19th day to the close of the menstrual cycle. Within this period conception rarely occurs.

In the after-treatment of a case where an operation for the relief of an impermeable occlusion of the œsophagus of five years standing had been performed, which operation was reported at length in the *N. Y. Med. Jour.*, of March 23rd, 1895, Dr. Augustus C. Bernays, A.M., M.D., Heidelberg, M.R.C.S. Eng., Professor of Anatomy and Clinical Surgery at the Marion-Sims College of Medicine, the operating surgeon, says: "The patient rallied fairly well after the operation, but she became greatly emaciated. Liquid food was given at short intervals and stimulants as indications demanded. In order to allay the extreme nervousness and irritability, antikamnia was given and it acted promptly and satisfactorily in every instance." Of the further history of the case it may be stated that on the seventh day after operation, the patient took into her stomach through the natural channel the first food which had passed it in five years; and that in two months convalescence was regarded as fully established.

Antiseptic Powder.—The *N. Y. Med. Jour.* gives the following:

℞—Hydrarg. chlorid. corros. . . gr. 1-5.
Ac. borici. . . . . ʒi.
Ac. tannici. . . . . gr. x.
Sacch. lactis. . . . . ad ʒii.

Mix sublimate gradually and thoroughly with the sugar, then add the rest. Useful where iodoform is usually employed.

To Lubricate Catheters.—The Paris correspondent of the *Lancet* says that Professor Guyon, of the Necker Hospital, uses the following formula, *Virginia Med. Monthly:*

℞—Bichloride of mercury . . gr. j.
Glycerin . . . . . } āā ʒij.
Water . . . . . }
Powered soap . . . . . ʒiv.—M.

This ointment is claimed to be unirritating to the urethra, and to possess greater lubricating power than either oil or glycerin.

Diabetes.—In *Gazette Degli Ospitali*, Doctor Leoni reports great satisfaction from the use of Jambul. He declares that the drug contains an active principle which, while not specific, is yet capable of neutralizing the diabetic process in individual cases.

ERROR IN OUR LAST ISSUE.—We regret that by an error in our last number, Dr. G. R. McDonagh was credited with having contributed an article on "Emphysema of the Maxillary Sinue," which was written by Dr. D. J. Gibb Wishart, of Toronto.

BLAUD PILL CAPSULES (D. F. & Co.). The profession will be glad to note, by announcement on page 267, that Messrs. Duncan, Flockhart & Co., of Edinburgh, have established a depot in Toronto for their famous capsules. Concerning these capsules there seems to be but one opinion in the medical world, that they are the most reliable preparation of this valuable formula available to the profession. The London *Lancet* says: "The administration of nauseous as well as unstable drugs in the form of flexible and soluble Gelatine Capsules has found favor with many, and a well-known firm like Messrs. Duncan, Flockhart & Co. is sure to devote great care in the preparation of medicaments of this kind. An illustration of this is afforded in the case of the Blaud Pill Capsule, which, of course, should contain, as far as is possible, the iron in the proto or ferrous condition. On examining a capsule made by this firm, and said to contain the equivalent of three pills, we found that of the total amount of iron present 92 per cent. was in the form of preto-carbonate."

Books and Pamphlets.

DOSE-BOOK AND MANUAL OF PRESCRIPTION-WRITING, with a list of the official drugs and preparations and also many of the newer remedies now frequently used, with their doses. By E. Q. Thornton, M.D., Ph.G., Demonstrator of Therapeutics, Jefferson Medical College, Philadelphia; Assistant Surgeon, United States Marine Hospital Service. Philadelphia: W. B. Saunderson. Toronto: Carveth & Co.

To the busy practitioner the Manual of Prescription-Writing should be very serviceable. It is a small, well written volume, neatly bound in cloth, and easily carried in the pocket, and is an excellent book to have while travelling, as it gives, in a brief space, a vast amount of information regarding the correct writing of a prescription. It gives briefly and alphabetically, a description of the official and officinal drugs and preparations now in use, with the dose of each. It also treats of the Solubilities and Incompatibilities, Weights and Measures, and the most ready and easy way of administering medicine. In all it is a book worthy the careful study of the student as well as that of the general practitioner, who wishes to gain the greatest amount of information by the smallest amount of reading.

FUNK AND WAGNALL'S STANDARD DICTIONARY OF THE ENGLISH LANGUAGE.

We have received the second volume of this magnificent work. It would be impossible in any ordinary review to give a tithe of the good points of the book. It is a book for all people, comprehensive, not overly bulky or verbose, up to date, containing all the new words which the past few years have introduced into our language, in Electricity, Medicine and other Sciences, and many words and phrases which we would not know where else to look for.

One thing we notice with pleasure, viz., the tendency towards the simplification of spelling as in the diphthongs "æ" and "œ" being replaced by "e" in words considered as fully anglicized. On the other hand "sulfur" "quinin" look barbarous to our unaccustomed eyes, though adopted by the Chemical Section of the American Association for the Advancement of Science. No further commendation is needed than our saying that it fills in every sense our ideal of what a dictionary should be.

MANUAL OF GENERAL MEDICINAL TECHNOLOGY, AND PRESCRIPTION WRITING. By Edward Curtis, A.M., M.D., Emeritus Professor of Materia Medica, etc., College of Physicians and Surgeons, Columbia College, New York City. 3rd edition; pp. 235. New York: Wm. Wood & Co. 1895.

This very handy and pleasingly gotten up little volume contains in short space much that every student in medicine and pharmacy should know, and would be of distinct advantage either alone or as supplementary to Pereira's or Griffith's handbook. It is divided into Part I, Technology of Medicines, and Part II, Technology of Medicating. The former has, as sub-divisions, such subjects as: The Authority for Medicines, The Naming of Medicines, Forms of Medicines, Determining of Quantities of Medicines, Prescriping of Medicines. Part II, has chapters on Modes of Medicating, Dosage, and an Appendix. It seems to be the result of much thought and experience as a teacher in medicine.

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THE CANADA LANCET,

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

Original Communications.

ON THE RADICAL CURE OF INGUINAL AND FEMORAL HERNIA BY OPERATION.*

BY ALEXANDER HUGH FERGUSON, M.D., C.M.,

Professor of Surgery in The Post-Graduate Medical School and Hospital of Chicago; Surgeon to the Charity Hospital and Chicago Hospital.

The familiar drawings which I here place before you, representing six different, well-recognized and accepted operations now in vogue, not to mention the many modifications recommended, all directed to the radical cure of hernia, furnish me with a reasonable excuse for presenting to the members of the Association of my *alma mater* a subject on which surgeons hold such a diversity of opinions. The various procedures to cure hernia—operative and otherwise—that have been practiced from time immemorial till the present have been so thoroughly described and demonstrated to us by not a few American and European surgeons, that I do not deem it necessary to inflict upon you to listen to any of the ancient history of this subject, nor shall refer to but the more recent operations by the open method, and of these, only those that are being performed to-day the world over.

A careful study of the anatomy and pathology of the abdominal wall in hernia, and an inquiry into the various master operations, bring me to the conclusion that not one operation yet recommended fulfils all the indications requisite for a radical cure. In this decision I am supported by a study of the relapses, and by my own experience. It is surprising what little attention, in works on hernia, is paid to the pathology of the abdominal wall. It is the dyke that must be walled up and cemented to prevent leakage. Let the passive intra-abdominal pressure predisposing to rupture be what it may—elongated mesentery, large omentum or what not—we cannot hope to lessen that to any extent; but we can strengthen the abdominal wall, at the seat of rupture, in such a manner as not only to withstand the passive, but also, in the vast majority of cases, resist the active pressure within the abdomen while straining, lifting, etc. In aiming at a radical cure, it is most important to obtain more strength at the seat of rupture than Nature had provided in these cases. If we simply restore the normal rotundity of the peritoneum, the internal ring and canal, as they were in them before the rupture, it is clear that under the same conditions and with similar causes at work, a recurrence would be almost sure to follow.

Let us briefly consider the anatomical and pathological weak points in the abdominal wall in ruptured cases of the oblique inguinal variety.

1. *The dimpling at the internal ring.*—This is the congenital depression in the transversalis fascia at the origin of the spermatic cord, where the vas deferens and the vessels meet. The mere passage of such a vascular cord would lessen the resisting power of the fascia, but when the structures which form it come from different directions, an additional condition, a V-shaped space exists, which predisposes to the occurrence of a rupture. The peritoneum lining it has very little to do with the strength of the belly-wall. It is the transversalis fascia that is the all-powerful structure. Its resisting quality is beautifully demonstrated when cutting the abdominal wall while doing an operation or a post-mortem, especially when the intra-abdominal pressure is great, due to the presence of growths or the accumulation of gas, for just as soon as the transversalis fascia is severed, out bulges the peritoneum. The internal abdominal ring is formed by this strong fascia, and once the internal pressure overcomes its resistance here, and it is left without artificial support being supplied, a complete rupture is sure to occur. The hernial protrusion acts like a wedge from within outwards, and forces the structures surrounding the deep ring and inguinal canal asunder.

2. The transversalis fascia is, in old-standing cases, eventually pushed downward, inward and backward, until the lower border of the ring not infrequently reaches the level of the pubic bone. The small normal infundibuliform process has be-

* Read before the Alumni Association of Trinity Medical College, Toronto, on the 4th of April, 1895.

come a large funnel-shaped cavity, so graphically described by Sir Astley Cooper years ago. The importance, therefore, of restoring the deep ring to as small a size as possible, without damaging the cord, and of obliterating the pathological funnel-shaped depression, is all-important. Macewen was the first to recognize that these two conditions (*a*) the anatomical infundibuliform process, (*b*) the acquired funnel-shaped depression, must be counteracted in order to prevent frequent relapses after operation for the cure of hernia, and this he aimed at doing by making use of the sac as a plug, at the peritoneal aspect of the internal abdominal ring.

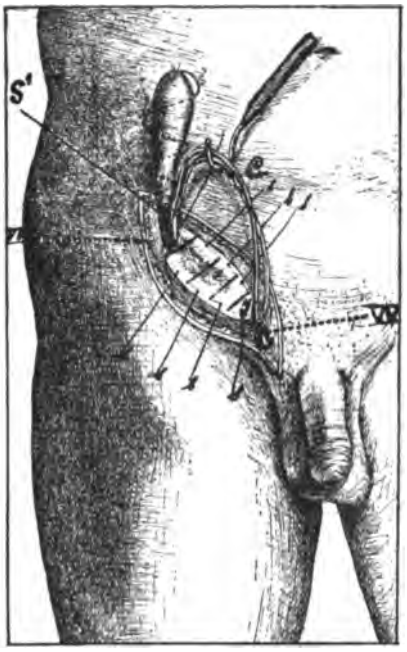

PLATE I.

S.—Sac.
S.—Suture in the sac.
C.—Cord.
W.—Veins excised.
T.—Transversalis fascia showing the deep ring enlarged.
SSSS.—Sutures in T. restoring the internal abdominal ring.

My experiences with Macewen's operation, in all those cases where there was a good-sized sac, and not too large an internal ring, nor an hypertrophied cord present, was all that could be desired. It is valuable to retain the sac, but when it is insignificantly small, and the transversalis fascia (at the deep ring) exceedingly relaxed and low down, it is not sufficient to fill the whole concavity at the seat of rupture. Let me say, however, that a small sac folded upon itself is better than no sac at all, and in support of using it as a tampon, let me here repeat what I have so often said before, that it is not much more liable to become absorbed than a severed tendo-Achilles, because, somewhat like it, its structure is comparatively a passive one, and fully matured white fibrous tissue. It has been my fortune to examine an anatomical preparation in the possession of Prof. Macewen, from a patient cured by his operation, who, without wearing a truss, had done heavy work for years, and then died of an aortic aneurism. The specimen showed the inguinal canal firmly closed, and at the abdominal aspect of the internal ring lay the sac folded upon itself into a dense cushion, which absolutely prevented any chance of a return of the hernia. Macewen stated that the rupture was one of long standing, and the sac very large and composed mainly of mature fibrous tissue. Should the rupture be recent and the sac principally composed of the elastic delicate peritoneum, then we could readily understand the correctness of Bassini's observation, that at an autopsy 95 days after an operation somewhat like Macewen's, not a trace of the tampon could be differentiated. I fancy, however, that the peritoneum must have been somewhat thickened at that situation, although the reparative plastic material had obscured it. That the tampon "must of necessity leave a hard painful swelling slow to disappear," as stated by Marcy, of Boston, has not been my observation in a single instance of a large number of cases.

3. The third condition, a pathological one necessary to counteract, is the overstretched condition of the transversalis fascia behind the spermatic cord, which is easily demonstrated by raising the cord from its bed. Bassini, Halsted, Marcy and others have recognized the importance of restoring the tensity of this strong fascia, and forming a new deep ring by suturing it from below upwards. Whereas Marcy does not, like Halsted and some others, cut through it, I prefer to follow somewhat in his footsteps, as being safer and more secure, particularly with my inversion stitches.

4. The spermatic cord is sometimes increased in bulk, by supernumerary and dilated veins. To Halsted is due the credit of counteracting this pathological condition, by removing all but one or two of the enlarged veins before making a new deep ring. A large cord, carrying a consid-

erable volume of blood, must have been a frequent predisposing cause of relapses. The larger the cord, the greater the diameter of the ring must be; and the compressibility of its veins would readily allow the omentum or bowel to enter the ring, during the maximum of intra-abdominal pressure.

5. The condition assumed by the muscular aponeuroses deserves careful attention. Some of the changes consequent to the constant pressure for years upon the structures external to the inguinal canal and hernia are, that they first of all assume a tumor-like appearance, which may come and go as the hernial contents protrude or recede. Within a variable time the bulging becomes permanent; and should these parts be now examined, the muscular and fibrous portions are found to be thin and overstretched; the muscular tissue more or less fibrous and atrophied, the fibrous elements less resisting; the cremasteric muscle appears like fibrous bands; the external oblique, internal oblique and transversalis muscles adherent together, making it difficult and sometimes impossible to differentiate one from the other, or, indeed, from the sac beneath them with which they also form a strong union; the conjoined tendon is forced inward and backward, while Poupart's ligament is pushed down and outward, and the pillars are found wide apart.

It is interesting to notice the alteration in the surrounding blood vessels. The deep epigastric artery may be almost obliterated, while the accompanying veins and the superficial vessels are enlarged and more numerous than is normal.

All of the above mentioned changes cannot be rectified by any operative procedure; but the abdominal aponeurotic walls can be thickened by overlapping and firmly securing them beneath the cord, while the conjoined tendon and internal pillar on the one hand, and Poupart's ligament and the external pillar on the other, can be approximated. While these different conditions and alterations are fresh in our minds, let us briefly associate with them the shortcomings of the principal operations, that have hitherto found most favor with the profession, in endeavoring to effect a radical cura.

I. CZERNY'S OPERATION, or BANK'S, as it is called in Great Britain, consists in removing the sac below a ligature, and of suturing the pillars together.

OBJECTIONS.

1. The sac is removed.

2. The infundibuliform process is not obliterated.

3. The tensity of the transversalis fascia is not restored.

4. The enlarged internal ring is not materially lessened.

5. An enlarged spermatic cord is not reduced in size.

6. The abdominal aponeuroses cannot be as firmly secured in front of the cord, without danger, as behind it.

7. Relapses are too frequent.

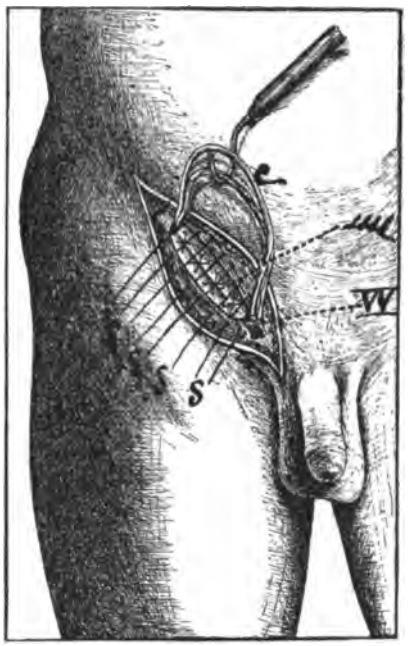

PLATE II.

S.—Sutures closing the canal.
C.—Cord.
W.—Veins excised.
SSSS.—Sutures in transversalis fascia tied.

II. MACEWEN'S OPERATION in selected, and perhaps in the majority of cases, is probably the best herniotomy for radical cure yet produced. In it the sac is utilized as a tampon to obliterate the infundibuliform process, and the canal is closed by bringing the external structures over the conjoined tendon and overlapping it, thus restoring its valve-like form. This is accomplished by means of one mattress suture of extra

stout chromic catgut. I cannot understand how surgeons can consider it a complicated operation, and I am sure it is not extremely difficult to perform.

OBJECTIONS.

1. A new ring may not be formed by the suture closing the canal, and the tensity of the transversalis fascia is not completely restored.

2. An hypertrophied spermatic cord is not reduced in size.

3. The suture, closing the canal, passes over the spermatic cord, which, if tied too tightly, endangers the vitality of the testicle, and it cannot be as firmly secured as when the cord is transplanted.

III. McBURNEY'S OPERATION (*Medical Record*, New York, 1889, pp. 35 and 312) is a reproduction of the idea conceived and carried into practice by M. Theophile Anger in 1887 (*Bul. Soc. Chir.*, 1887, p. 664), and also by Schede, of Hamburg. The neck of the sac is ligatured as high up as possible, and the sac cut off. The edges of the skin are sewed to the deep fascia, the wound packed with gauze, and allowed to close by granulation tissue formation.

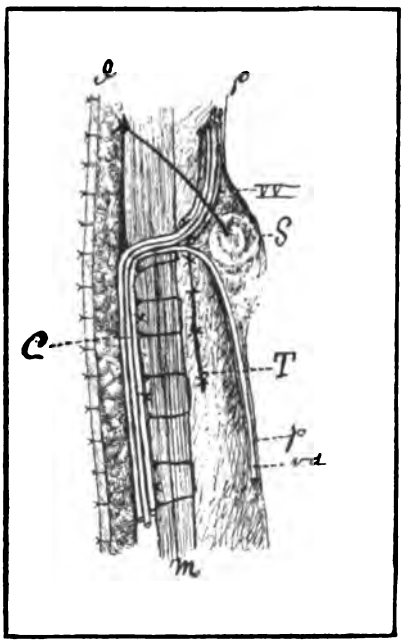

PLATE III.

C.—Cord in its new bed.
I.—Integument and subcutaneous tissues.
M.—Muscular wall sutured.
P.—Peritoneum.
VV.—Veins excised.
S.—Sac folded upon itself and showing the puckering suture.
T.—Transversalis fascia sutured.
VD.—Vas deferens.

OBJECTIONS.

1. The sac is sacrificed.

2. Scar tissue weakens, the older it gets. We are well aware of the changes that time works in all cicatricial tissues, rendering them thinner and softer. Lucas Championniere and M. M. Terrier (*Bul. Soc. Chir.*, 1887, p. 680) are decidedly of the opinion, as are many others, that scars resulting from granulation-tissue are not preferable to those obtained from healing by first intention, with which we agree.

3. The tensity of the transversalis fascia is not restored.

4. The pathological internal ring is not lessened in size.

5. The cord is not reduced when abnormally large.

6. Relapses are becoming more and more frequent.

IV. KOCHER'S OPERATION consists in dissecting out the sac, dragging it through a small incision in the aponeurosis of the external oblique, twisting it vigorously upon itself, strongly pulling it down, and laying it over the surface of the external oblique muscle in the inguinal canal, where it is firmly secured with sutures.

OBJECTIONS.

1. See objections 2, 3, 4, 5 and 6, to Czerny's operation, which stand equally good here.

2. It is not suitable to strangulated, incarcerated, irreducible or congenital hernia. The class of cases which Kocher selects for his operation is inferred from his own words, as follows: "The structures of the spermatic cord are now separated, in which by holding them toward the light, the border of a very thin hernial sac can be recognized." (*Annals of Surgery*, Vol. XVI., No. 6, p. 524.)

3. The results are not the most promising, and in this connection let me again quote from the same article, p. 505, as follows: "When we assume that about one-fifth of our patients are subjected to a second operation for recurrence," etc. Twenty per cent. of relapses does not speak very highly for an operation which does not in-

clude the most difficult cases, and should be discarded on Kocher's own statistics.

On the same page he says: "The chief thing is that we cure four-fifths of the patients, those who remain radically healed, with a mimimum loss of time and sacrifice of every sort." (An average of seven and a half days in bed.)

V. BASSINI'S OPERATION has many admirers in America. It consists in ligaturing and cutting off the sac; raising the cord and suturing the border of the rectus, internal oblique, transversalis and the transversalis fascia to Poupart's ligament, behind the cord. The aponeurosis of the external oblique is sewed in front of the cord.

OBJECTIONS.

1. The sac is cut off.
2. The triangular depression, where the vas deferens and vessels meet to form the spermatic cord, is left unguarded except by the elastic peritoneum.
3. Supernumerary veins are not removed from the cord, should they exist.
4. I think it an objection that all the aponeurotic structures are not sewed behind the cord.

VI. HALSTEAD'S OPERATION differs so much from Bassini's that it may be called quite a different and an original operation. It is a very complete and carefully studied out laparo-herniotomy, and has added something new to the means which aid in securing a radical cure, viz., the removal of the superfluous veins from an hypertrophied cord. The skin incision is made in the usual way, but extends upward quite far. "The aponeurosis of the external oblique muscle, the internal oblique and transversalis muscle and the transversalis fascia are cut through from the external abdominal ring to a point about 2 cm. above and external to the internal abdominal ring. The vas deferens and the blood vessels of the cord are isolated. All but one or two of the veins of the cord are excised." (Halsted.)

The sac is cut away, the peritoneum sutured, and then two other rows of sutures bring the severed structures together. The cord is left subcutaneous.

OBJECTIONS.

1. The sac is not utilized.
2. The six or eight mattress sutures are inserted in such a manner that, when tied, an eversion is effected which leaves, internally, a certain amount of concavity along the whole line of the incision.
3. The V-shaped depression where the vas deferens and vessels come together is not strengthened.
4. There is too much cutting of important structures situated above the internal abdominal ring. It is practically a laparotomy.

In Dr. Halsted's paper (*Bulletin Johns Hopkins*, No. 29, March, 1893) it is stated that "the communication between the sac and the abdominal cavity is sometimes large enough to admit one's hand."

The severance of the three abdominal muscles and deep fascia above the internal abdominal ring is not necessary. We know that simple abdominal section in the hands of the best operators is, in a certain proportion of cases, followed by rupture. Every structure cut which strengthened the abdominal wall has to be sewed. The more extensive the cutting, the more numerous the stitches of necessity must be. In every stitch there is a danger of its being insecure or septic.

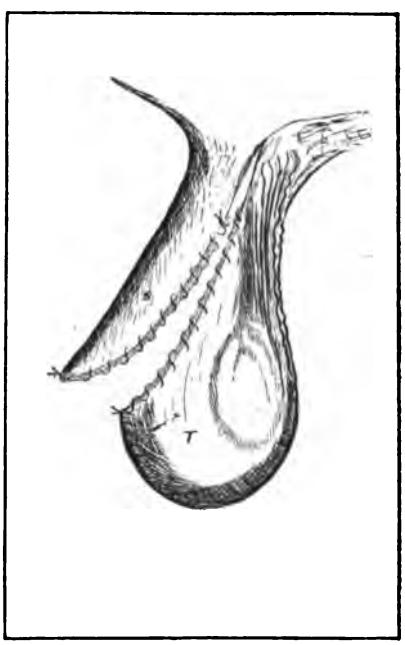

PLATE IV.

DEALING WITH THE SAC IN CONGENITAL HERNIA.

S.—Sac formed from upper half of the tunica vaginalis testis.
T.—New tunica vaginalis testis.

It is, therefore, clear that this operation introduces additional predisposing causes of relapses.

From the trend of the foregoing remarks on, and objections to, the operations mentioned, the character of the combination operation advocated by myself may have already been anticipated by you. I shall now endeavor to describe it.

OPERATION.

The incision, three or four inches in length, extends parallel to Poupart's ligament over the inguinal canal to the pubic spine. All the structures in front of the inguinal canal, from the internal to the external abdominal rings, are rapidly divided and the blood-vessels secured without staining the tissues. The sac is dissected out, almost invariably opened for inspection, and its neck loosened from its deep attachments with the finger (Macewen). It is then several times transfixed in a proximal direction with a stitch that has been firmly secured to the distal end, so that, when the proximal end is pulled upon, the sac is thrown into folds like a curtain. Finally the needle carrying this thread is pierced through the abdominal wall from within outward along the inserted finger between the peritoneum and the transversalis fascia, and made to emerge subcutaneously at the upper angle of the wound, about an inch above the internal abdominal ring (Macewen), Plate 1. Let it be borne in mind that the needle does not penetrate into the peritoneal cavity. Before fastening the sac in situ, it is best to raise the spermatic cord, and, if necessary, remove the supernumerary veins (Halsted); and even when this is not necessary, it is well to make a circular incision through the fascia propria of the cord, and invert it at the new internal ring. The suture which folds the sac is now pulled tightly, fastened to the external oblique muscle, and the sac adjusted in its proper position. It will be noticed when the cord is raised that the tampon occupies a position at its origin where the vas deferens and vessels meet, and, if of good size, more than fills the infundibuliform process; but when the sac is ligatured or sewed across and cut off, this process is left empty. The next step is the suturing of the transversalis facia from close to the pubic bone (when necessary) to the root of the cord (Marcy), with three or four of my inversion sutures. When the deep ring is not much enlarged, and the transversalis fascia but slightly relaxed, a couple of stitches may be all that is required. The last one completing the formation of the new internal abdominal ring, is the most important, just leaving space enough for the cord, and no more. The inversion suture is inserted by piercing the deep fascia parallel to Poupart's ligament in two places from without inward, and from within outward, with the first bite of the needle. The needle is drawn it through, and the thread is carried across to the border of the conjoined tendon, where a similar bite is taken directly opposite (Plate 1).

When all are passed and tied, they restore the tensity of the transversalis fascia, at the same time invert the tissues, and cause a convexity on the internal surface. In passing these stitches, great care is exercised not to include the peritoneum. In some cases, the fascia and peritoneum may be adhered together; then it is wise to place the patient in the extreme Trendelenburg position, and always use a fully curved needle without a cutting edge. It is only necessary to suture that portion of the transversalis fascia that has become relaxed. The approximation of the muscular aponeuroses of the abdominal wall is done with three or four mattress sutures from below upward, in such a manner as to bring the external and lower structures, Poupart's ligament, fibres of external oblique, internal oblique and transversalis muscles over and in front of the internal and upper structures—conjoined tendon (Macewen), and external oblique and all beneath the cord (Halsted). (Plate 11).

The first mattress sutute is made to penetrate the conjoined tendon and internal pillar in two places with one turn of the needle, from without inward near their lower border, and again from within outward. The two ends of the thread are now passed through Poupart's ligament and the internal pillar from within outward, about half an inch apart. In passing the rest of the sutures exactly in a similar manner, the practical part to remember is, that all the structures from the transversalis fascia to the subcutaneous fat are included; and that they are all tied beneath the cord. When the conjoined tendon is thin and delicate, the border of the sheath of the rectus muscle must be grasped by those sutures. Should the overlapping be considerable, it may be and often is necessary to put a few retention sutures

along the edge of the overlapping structures. To complete the operation, the cord is laid on the external surface of the external oblique muscle, and the skin sutured over it with a continuous buried suture (Halsted), or in the ordinary manner.

I have only operated after this method for about a year, and sufficient time has not elapsed to speak of results; but the combination operation (as I call it) should commend itself, in that it is based on anatomical and pathological facts, and upon the results of other operations. It utilizes the sac for a purpose; tightens up the transversalis fascia, and makes a new ring for good reasons; it reduces the size of the spermatic cord when it is redundant; it makes the best use of the aponeuroses to thicken and strengthen the abdominal parietes; and it is suitable to every degree and form of oblique inguinal hernia, from bubonocele to a complete scrotal, even incarcerated or strangulated.

Should the hernia be congenital, the enlarged tunica vaginalis testis is divided into two parts obliquely from below upward to a point where separation of the serous membrane from the cord is most easily effected, and each half closed by itself—the one forms a neat tunic for the testicle, and the other half a sac to be used as a tampon (Plate IV). The operation is now proceeded with as already described.

Plate III. schematically represents a longitudinal section of the completed operation.

THE RADICAL CURE OF FEMORAL HERNIA.

The radical cure of femoral hernia has not engrossed the attention of surgeons to the same extent as have operations for the inguinal variety. This may be partly because the material is not so abundant, and owing to the belief of the operation being more difficult to perform. Even our most recent text-book, "An American Text-Book of Surgery," takes no notice of the radical cure of femoral hernia.

The crural rupture is much more liable to become strangulated than is the inguinal. It is not uncommon to find it "strangulated at the time of its first descent," which fact alone calls for more consideration of this affliction.

Sir Astley Cooper dissected out the sac and closed the femoral ring by sutures. Mitchell Banks places a ligature around the neck of the sac and then cuts it away, but no attempt is made to close the canal. Ball and Heuston twisted the sac, ligated its neck and cut it away, and closed the femoral canal with sutures. Barker removes the sac after ligating the neck. The stump of the sac is pushed under the femoral arch and the canal closed with sutures which grasp the pubic portion of the fascia lata and Poupart's ligament. Marcy cuts the sac off below a ligature, and closes the canal by sutures of kangaroo tendon. McBurney used the open method: the sac ligated, cut away, and the wound packed with iodoform gauze. Macewen, of Glasgow, used his unique method, which has not yet been surpassed, especially with the slight modifications recommended by Cushing, of Boston, and others who have followed in his footsteps. The sac is saved, folded upon itself with a puckering suture pushed within the

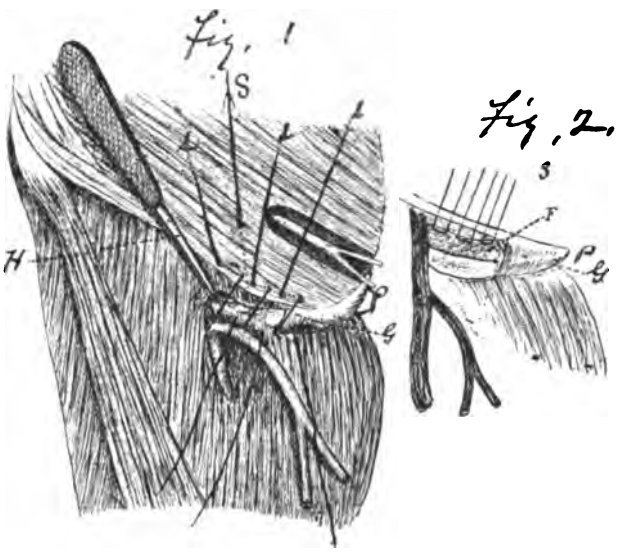

PLATE V.

Fig. 1.

H.—Blunt Hook raising the falciform ligament.
S.—Suture holding the puckered sac in situ.
SSS.—Sutures inserted into the pectineal fascia and Poupart's ligament.
P.—Pubic bone.
G.—Gimbernot's ligament.

Fig. 2.

F.—Periosteal flap.
S.—Sutures uniting F with Poupart's ligament.

abdomen and fastened there so as to form a prominence on the internal aspect of the peritoneal cavity, which in the most efficient manner possible plugs the femoral canal from within outward with the most desirable material.

Macewen completed the operation by stitching the falciform process to Gimbernat's ligament, thus restoring the valve-like condition of these parts in their natural relationship.

Dr. Cushing closed the femoral ring with a quilted suture, fastening the pubic portion of the fascia lata, covering the pectinous muscle, to Poupart's ligament, before closing the saphenous opening after Macewen's method. This, to my mind, counteracts all the pathological conditions presented in the vast majority of femoral hernise, and a radical cure is effected.

I close the canal with three inversion sutures (Plate V, Fig. 1), seizing hold of the pubic fascia close to the bone, and then grasping the ligament of Poupart from above downward, which, when tied, recede the falciform process behind them into the canal on a level with the deep crural arch. In this position, the external structures are closed upon the boss within. When the sac is small and slender, and Poupart's ligament cannot be brought down sufficiently close to the pectineal fascia to effectually obliterate the femoral canal, there need be no hesitation in raising a periosteal flap from the pubic bone, sewing it with quilt sutures to the deep crural arch (Plate V, Fig. 2), and then fasten the falciform process beneath it, as already described. I have raised the periosteal covering only in one case, but it admirably suited it, and a most satisfactory result was obtained.

Dr. W. Watson Cheyne (*Lancet*, London, 1892, p. 1039) described a new method for operating for femoral hernia. The sac was ligatured and cut off, and a flap from the pectinous muscle (taking its whole thickness) was raised and sutured into the femoral canal as an external tampon. It is hard to see the philosophy of cutting off a sac which can be readily, safely and efficiently utilized as a plug, being already fibrous tissue, and raising a mass of muscular tissue which in time becomes converted into fibrous material. Should the sac be too small, and the canal large, no doubt Cheyne's flap would be a great help to prevent relapses.

Dr. Josef Fabricius (*Centralblatt für Chirurgie*, Feb. 10, 1894) recommends to ligate the sac and cut it off; freely expose the crural canal by division of the superficial layer of deep fascia and removal of loose cellular tissue; the internal attachment of Poupart's ligament is divided, thus relaxing it, and it is then stitched to the pectineal fascia, the origin of the pectineal muscle, and to the periosteum of the horizontal ramus of the pubes. The first stitch is applied next to the femoral vessels, which have been held by a blunt hook toward the ileo-pectineal eminence, and this stitch prevents them from returning to their normal position. The author also recommends to stitch the superficial layer of deep fascia to the pectineal fascia along the femoral vein. The objections to this operation are (1) the removal of the sac; (2) the division of Poupart's ligament, and (3) the permanent displacement of the vessels (if such is possible), which would have a tendency to produce a varicocele of the femoral vein.

Bassini (*Arch. für Klin. Chir.*, Bd. 47) has given his method of operating on femoral hernia. It consists in removing the sac and then using two rows of sutures, one fastening Poupart's ligament to the pectineal fascia to close the femoral canal, and the other securing the falciform ligament to the pectineal fascia.

Let me recapitulate the steps of the operative procedure I recommend for the radical cure of femoral hernia.

I. The skin incision is made parallel to Poupart's ligament, and half an inch above it. This allows one to reach the neck of the hernia with ease and accuracy; the scar will be out of reach of the pressure or friction of the thigh, and it allows of an examination of the inguinal canal and rings, which is important.

II. The sac is dissected from the surrounding structures and opened, unless by feeling you are certain that it is empty. As a rule it is better to open the sac, and should omentum be found, it is tied with interlocking ligatures and cut away. The raw stump left should be covered with peritoneum before returning it into the abdomen.

III. The sac is now folded upon itself and fastened within the opening of the crural canal (Macewen). The whole sac is better than the stump of one, or no sac at all. It should not be ligatured round its neck and then retained, as is the practice of some surgeons, because its nutri-

tion is directly interfered with, which may cause it to slough off; or, should it live by imbibition from the surrounding structures, as it usually does, degenerative changes are liable to follow.

IV. When the sac is sufficiently large to close the internal opening of the canal, suturing of the pubic fascia to Poupart's ligament, and placing the falciform process into the external opening of the canal, by means of the inversion sutures of strong chromic catgut of silk, is quite enough.

V. When the sac is small, the hernial opening large, and Poupart's ligament cannot with ease be approximated to the pectineal fascia, a periosteal flap may be utilized, or a flap of the pectineal fascia and muscle can be raised and stitched to form a buttress instead, as practiced by Cheyne.

THE PHILOSOPHY OF PELVIC AND ABDOMINAL SURGERY.*

BY DR. JOSEPH PRICE, PHILADELPHIA, PA.

Shakespeare makes Hamlet say: "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy."

Twenty years ago this prophetic reply might have been aptly made to the censurers and unkindly critics of pelvic surgery, and even of abdominal operations. Within the sacred pale of the abdominal cavity, none but the post-mortem operator was permitted to go without censure. The elect and specially favored dispenser of doubtful drugs lulled his patient to her long repose with the never-failing, ever-present opium, and the patient, "half in love with easeful death, called her sweet names," and blessed the dispenser of this last comfort, who received it with all the unction of a faithful servant who stood by her to the last. There are still some survivals of this same sort, unfortunately, not however, according to the Darwinian theory.

The rise and progress of abdominal and pelvic surgery, must be for all time a study and a lesson as to the mutability and uncertainty of all matters in which progress, innovation, and tradition are concerned.

All progress comes of abandonment or modification of a hitherto fixed idea. Honest men work and act from convictien. The man who stands must not contradict the man that runs, or the man that walks. The sleeper must not confute the worker, nor the man comatose, by heredity, the prophetic dreamer.

The man that learns nothing new, and the man who forgets nothing old, is never in the way of progress. Ideas grow by experience, unless the experience is one that dwarfs and cripples intelligence, through fear or timidity, or inefficiency. Herein lies the difficulty of arriving at correct data, as to what should be considered progressive and what detrimental innovation and doubtful advance. Men who have ideas walk side by side with those who think they have.

In the masquerade, the wise man is often dressed as a fool, and the clown puts on the wisdom of the Seven Sages. With many men, the "original" idea is a besetting sin. An old couplet puts it thus:—

> Whenever yet was seen a mother
> Who'd give her booby for another?

In medicine, surgery, and especially in gynæcology, how often do we see the idea maintained against reason, experience and common sense, all, and only for the sake of "originality." In the mechanical sciences practicability is paramount. An idea to be acceptable, or merit serious consideration, must be a working idea. The same rule should apply in surgery, which is the mechanics of medicine. An experience in navigation not founded on compass and chart, would meet but the derision of all scientific navigators. Isolated cases in no branch of medicine can be considered a universal experience. In this direction lies the fault of much of the medical literature of to-day. Single-case surgeons rush into print, and lay down dogmatic axioms as to the operative procedures of a class of cases of which they are totally ignorant, with the result that many are misled into believing them an absolute authority, from a wide experience, and a consequent calamity to the learner, and many patients certainly, and incidentally to older workers who yield their sense and experience to a misleading Will-o'-the-Wisp.

The result of all this is a far-reaching evil. Rashness steps out beyond the confines of the real conservatism of surgery, the conservation of human life; ignorance opposes all progress, and trusts to the conserving powers of nature, forgetting that nature often goes astray, or is attacked and routed, and that it is our efforts that set her right; timid-

*Read before the Alumni Association of Trinity Medical College, April 4th, 1895.

ity and inefficiency stop short of legitimate bounds, cry for help, and failing, cry out, "Peccavi—let us stop." Thus it is we see men constantly reversing their opinions and shifting ground, and trying something new, simply because they have failed in the old, and not because the old is a failure. If we look over the field of gynæcology, with which we have now especially to deal, we shall see that the continual shifting and varying of opinion and method, is the characteristic of these two classes of workers, those who first rashly dogmatized, and those who, in spite of some experience, have failed to reach results above criticism. It is obvious that we must follow the teachings of such as these afar off, and utilize their dogmas by avoiding them. Do not for a moment consider that in this category are to be placed the pioneer workers of the field.

Their efforts are above criticism. Their labors have made possible our advances, and the rich harvest of their experience is ours by inheritance, not at least often by genius. Their wisdom has become our knowledge.

> "Wisdom is humble that she knows no more.
> Knowledge is proud that she learned so much."

In dealing with these matters, let us be glad we are able to learn, humble that we cannot know it all, and proud only to be worthy successors of those brave pioneers who have preceded us.

Unfortunately for the progress of gynæcology, scientific emulation has too often been replaced by personal conflict, so that men, who, had they gone on in the ranks, might have added much to the sum total of advancement, became only obstructionists, and their influence, if not totally lost, was in an extreme degree negatived.

Personal antagonism as heretofore existing, has its counterpart at present in an entirely unnecessary conflict as to the pathology of pelvic and abdominal disease. Pelvic cellulitis, the universal pelvic affection of the ante-bellum days, is once more being resurrected and made to play its part as a factor in pelvic pathology. True it is that it is oftenest brought in now-a-days as a puerperal affection, but scarcely so frankly as one might wish, and often with a careless disregard of the fact that its existence in isolated puerperal cases has long ago been demonstrated, and that in pelvic disease it has been argued and demonstrated out of the field. Let it be remembered that in order to prove the existence of any given trouble, no half-way proof is to be accepted as final, and that we are not to stop when a point is apparently conclusive, unless it is just as evident that nothing else can put a different phase on our supposed fact.

Puerperal cellulitis, apart from disease of the tubes and ovaries, concomitant with the presence of pus, is sufficiently rare to make us question the rather too frequent finding of it altogether confined to a very few observers. Operators of the widest experience have discovered it almost not at all. The pathology broadly considered, must point to, and demonstrate distinct lesions in, the pelvic viscera, in order to justify their removal. Pathology in a measure, after it has demonstrated the presence of a lesion, together with its probable complications, ought to put us on the track of the most probably logical line of attacking a given lesion. But at the present time there is an unfortunate clash of methods in the attack of pelvic disease. There is a tendency to assume various points as proven, which, in the light of the experience of skilful operators, whose success is not questioned, can at best be only extremely doubtful. Such for instance is the assumption that in pelvic disease, in most cases the entire ablation of the uterus, together with the appendages, is indicated.

The arguments by which such conclusions are reached, certainly do not come from anything approaching a majority of cases hitherto operated on. That here and there, or even in a considerable number of cases, there is after-disturbance consequent upon pelvic operations, all the nervous phenomena of a pre-systolic menopause does not prove or even suggest the fact that uterine disease has co-existed with the pelvic disorder. The facts are distinctly on the other side, for it is well known that operations for pus in the tubes and ovarian abscess, have given the most satisfactory results, and have yielded probably by far the greater amount of permanent cures. Notwithstanding all this, in certain quarters, we are hearing the operation of morcellation heralded as the coming procedure, of its great safety and of the brilliant results in the hands of certain operators. The reasons for all this cannot be obvious to the thoughtful surgeon, when we consider the arguments for vaginal attack upon pelvic disease, as suggested by this operation, are

just those on account of which it was tried and found wanting, and that certain explanations are given for its success, when these same factors were condemned, in the abdominal operation as unnecessary. In this line especially is to be considered drainage. One operator gravely gives the perfect drainage of the vaginal operation as perhaps the chief factor of its success. Can we overlook in this light how strenuously many of us have been opposed, in our support of drainage as a necessary step in such pelvic work? Then, again, while arguing the vaginal method as the perfect procedure, it is seriously interpolated, that it is necessary to search carefully for multiple abscesses. "If left behind they will cause further trouble. To be sure it is possible and quite probable that they will open spontaneously in a day or two, but it is not safe to count on this event."

By the abdominal method we find these pockets without tedious search and we knew we are not leaving them, and we have long ago learned, and knew it without learning it, that it is unsafe, nay, fatal, to ideal results to leave them.

Again, we are directed in this operation, that when persistent, careful efforts have been made without avail to remove the appendages, "they must be abandoned," and nature allowed to complete the cure. And this "in a supposed ideal operation" to the complete removal of the uterus, granting for the sake of argument that, as these extremists claim, it is always the starting-point of pelvic disease.

Consider the following: "Very seldom does the fundus of the uterus have to be abandoned. The final result, however, is said to be quite as good, provided the stump does not offer an obstruction to the flow of pus, if there should be any. Then, again, it is claimed in many of these operations that they were inoperable cases, by the abdominal method. By whose dictum, pray? Shall we take as final the opinion of those, whose explanation of a favorite operation shows that they fear the essentials of a more surgically complete one?"

Enough has been noted to show that, surgically considered, the vaginal resurrection in the way of surgical attack on the disc-viscera pelvis, cannot be considered as an ideal operation. It is only the revival of an abandoned procedure, for the removal of the annexa, and to it is added the removal of the uterus itself. Remember, we are not here considering simple vaginal hysterectomy.

This as an operation has its distinct field. From an experience which covers a great many cases of all kinds, embracing adhesions of all sorts and degrees, having had to deal with them both vaginally and from above; from an extensive experience, in dealing with abscesses, of all the pelvic viscera, single, multiple and diffuse, both in the tubes and without them, I have no hesitancy in expressing the opinion, that the time is not far distant when the very sanguine expressions of opinion concerning this much vaunted ideal operation, which is not ideal at all, will be much modified.

Over-enthusiasm cannot long override solid reason.

Adhesions that have a history of years in pelvic inflammation, involving omentum, intestines, large and small tubes and ovaries, with constriction, and, often, necrotic spots in the bowel, cannot fade away as if by magic, simply as a result of vaginal attack. We know that often adhesions of intestine and omentum constitute the chief factors of a woman's suffering. To leave these because we dread to enter the peritoneal cavity, is simply to confess we cannot enter it to our satisfaction. Who would seriously think of abandoning an incarcerated hernia, through fear of entering the abdomen? and yet this is the identical logic of this much vaunted "ideal operation," that we do not enter the abdomen; but nevertheless, the adhesions melt away. They may do so in France, and other foreign countries; I have not found it so at home. It is not easy to understand how any considerable number of operators, familiar with all the lesions commonly found in pelvic work, can lightly pass most of them by, trusting only to blind fate and chance. To have once seen a completed operation, a perfect abdominal toilet, is to increase the mystery of its abandonment, for a procedure necessarily so inexact as the vaginal method of dealing with extensive pelvic inflammations.

It is not sufficient to criticize any one method or to uphold it in order to lay claim to perfection of method and results. The field is too wide dogmatically to lay down any one procedure and claim for it as all-embracing, never-failing and as a posi-

tive cure-all. It is well in the light of claims like these to take a bird's-eye view of many of the steps and fads that have been supposed to render all this branch of surgery safe and never-failing Only a few years ago we were urged to put all our patients in the Trendelenburg position, if we wished to have a specific against pus infection, hæmorrhage, unnecessary manipulation, superfluous ligatures and so on *ad infinitum*. This position, you all will remember, was invented—we must not forget to dwell on the word *invent*—in order to render supra-pubic lithotomy easy and safe. What its merits are for this special operation I leave it for each one to determine for himself. What has been claimed for it in other respects will be found to have had very little influence either on the success or failure of any great number of operations. Certain it is that any man who could not do pelvic surgery without it can not do pelvic surgery with it, and the enthusiasts who found in it the legend, "All pelvic surgery made safe and easy," have found themselves bitterly disappointed, and now may find a new satisfaction in abandoning a German panacea for the French placebo.

What has been said of claims for methods may be also affirmed of labor saving complexities in the way of instruments. Instruments that have been invented in order to facilitate one single step of an operation are in the road. They are thrown out into the surgical world as nature grows weeds, prolifically, not usefully. They usually take their origin from an incomplete understanding of the many nice steps and infinite detail embodied in a difficult pelvic operation. The presence of an instrument on the operation table for each of these would convert it into a clinic for the exhibition of the surgical instrument maker's art. We remember something of how this looked if we recall the multitudinous array and paraphernalia on clinic days of our student life.

Now we must work on different lines. Simplicity, not complexity, is the keynote of success. Neither German bake-ovens, innumerable germicides, nor dress suit operations, elaborate operating rooms, connected with a sewer, as they all are, make perfect surgery. Antiseptics have their place, but they do not insure success in surgery. It is just as possible to be clean without them as it is to be dirty with them, and the technique that does not trust in and consider normal cleanliness, but leaves all to antiseptics, must always be a faulty one and a dangerous one.

Hot water and soap is at the bottom of all really refined technique, not only at the time of operation but as a constant habit of life. We cannot be spasmodically clean, any more than we can be spasmodically pious. The spasmodically pious man must needs make extreme effort to be good; it is the same with cleanliness. For success in this line of work efforts are to be made from start to finish to move directly to a given end. Each step is to be taken up orderly and systematically, with no capricious abandonment of one plan for another. The campaign must be planned previous to the active warfare, or the result will be a Chinese rout.

What I consider the essentials of technique will next be presented for your consideration, summarized in a previous paper.

Here, as in all other operations, the less the paraphernalia and complexity, the less the danger of annoying delays and impediments to speedy and careful, uninterrupted work.

The incision should be as short as is consistent with the removal of the diseased part. This is of importance also at the close of the operation. The smaller the incision the less we have to deal with in closing. If the tumor is irreducible, the incision must be longer than otherwise. Adhesions are to be dealt with as they are found, and not passed by. Ligation of bleeding points must be carefully attended to. All points of bleeding do not necessarily require a ligature. The hæmostatic forceps very readily controls many of these, especially in the incision. Too numerous ligatures introduce an irritating element into the surgery of the pelvis and abdomen whose evil is far reaching and should be avoided. All pathological conditions should be removed as they are discovered. Adhesions freed, *débris* consequent upon these removed, and the really diseased organs carefully separated and tied off. Leaking vessels must be controlled, and must be primarily handled so as excite as little hæmorrhage as possible.

This is accomplished by breaking the adhesions down with the cushioned end of the finger, using the nail practically not at all, and the scissors or knife never, unless where it is absolutely necessary to tie. After adhesions are loosened and ligatures placed, the toilet is to be looked to. Drainage is

the most essential feature, and this is begun by flooding the abdomen. The abdominal douche is as necessary for successful surgery in the peritoneal cavity as is soap for common cleanliness. The sneerers at drainage all with common consent acknowledge the efficiency of flooding out the abdomen to clear it of *débris*, pus, clots and the like. Not only does it do this but it is a powerful stimulant in shock, and enables many a successful recovery to be made, where otherwise we would lose our patient. Now drainage—I mean glass drainage, not a gauze masquerade—simply continues the good work initiated by abdominal flooding. It permits the escape of lymph, the smaller clots, the serum from the irritated surfaces, and conduces to bringing the peritoneum into a more natural condition. Gauze simply extracts fluid as such, and does not permit of the eliminations of anything else whatever. It is interesting to note in this connection that those operators who so bitterly opposed drainage some little time ago, now commonly pack the pelvis full of their so-called gauze, drain from vagina to and through abdominal incision, and with the same consistency yet violently oppose supravaginal extraperitoneal hysterectomy, which when perfectly done does away with all intraperitoneal tinkering, and closes without even leaving a sinus.

One thing an operator has to learn. He is the head, judicial, legislative and operative in all that concerns his patient. He is bound to see that all is in working order before he begins work. He is to know that all around him are trustworthy and efficient. If he is in doubt about this he has no right to begin work.

If he begins work without skilled assistance, he must know himself capable of going through it without assistance. In the event of failure, he has no right to bulldoze those around him or lament their inefficiency. Subjective fuss combined with objective feathers reduces surgery to a farce, and the operation often to a tragedy.

ELECTRICAL TREATMENT OF RED NOSES.—Dr. Helling says that a red nose is due to contraction of the arterioles and dilatation of the veinlets. He claims to have cured a number of cases by the application of a continuous current of moderate intensity for five to ten minutes daily.

Selected Articles.

TUMOR ALBUS OF THE KNEE-JOINT.

The objects and limitations of this paper are to present a summary of the points to be observed in the treatment of tumor albus of the knee-joint, and especially to call attention to the fact that most excellent results are obtained by the use of conservative measures.

I will classify the treatment under the two headings of *constitutional* and *local* measures, and the *local* under the sub-divisions of *conservative* and *operative* treatment.

I. CONSTITUTIONAL TREATMENT.—In few, if any, local diseases can we afford to overlook the general health of the patient. Especially is this true of tubercular inflammation of the joints, where mal-assimilation or any impairment of general health is directly registered by an unfavorable progress of the disease. Under this head I will merely call your attention to the advantages of hygienic surroundings, good food, sunlight, and moderate exercise, with the precaution that the joint is fixed and protected against jar and contusion.

The general remedial agents that we are all in the habit of using as systemic tonics are iron, arsenic and strychnia, cod liver oil, iodine and mercury. Guaiacol has come to the front in more recent years as being especially curative in tubercular joints. Max Schuller reports successful experiments with this drug upon animals, made by himself in 1878. Dr. Griffith, of Kansas City, reports to the American Orthopædic Association the advantageous use of this drug in tumor albus, and that he proposes to continue its use. Senn also reports favorably on the use of this drug.

II. LOCAL TREATMENT—.(a) *Conservative.* (b) *Operative.*

(a) The *conservative measures* to be carried out in the treatment of this affection are :

1. Counter-irritation and local applications,
2. Fixation,
3. Protection,
4. Extension,
5. Rest,
6. Correction of deformity.

1. *Counter-irritants* are pretty nearly universally denounced, though I venture to say that one-half of the cases of white swelling in the hands of the general practitioner are painted with iodine at some time or other. Heat and cold are at times useful in modifying the circulation and relieving pain. I have seen old knee cases of one, two or three years' standing, at the time of an exacerbation when the joint was hot, red and painful, be almost entirely relieved after several hours' application of a hot fomentation.

2. *Fixation* may be accomplished by almost any one of the various designs of posterior splints, many of which are made of felt, leather, steel, wood, etc., and are adjusted by the use of bandages, straps and buckles Plaster or silicate bandages make good splints, provided the bandages are carried well up to the ankle and are applied snugly to the limb. This form of splint can be cut down in front and made to lace, in which case it can be removed at any time, the knee inspected and the splint adjusted.

3. *Protection.*—In the treatment of diseases of the joints in the lower extremities, we may take a hint from observations of nature as suggested by Dr. Judson, of New York, who, on examining the annual report of two New York orthopædic hospitals, called attention to the fact that disease of the joints of the upper extremities is relatively quite rare, thus indicating that while treating the diseased lower limb it should be made pendant like the upper; and further, that the limb in bearing the weight of the body is subject to blows and concussion in the act of walking. The limb can be made a pendant member, and thus protected by building up the shoe on the opposite side, and by the use of axillary crutches. Let me here say that I find it the invariable practice of instrument makers in Cleveland to build up the shoe on the diseased side, both in hip disease and white swelling, thus making it impossible for the patient to prevent more or less concussion to the joint.

Small children, we find by experience, do not make good use of crutches, but throw them to one side and hobble away on the diseased limb. It is, therefore, essential in treating children having this affection to furnish them a crutch from which they cannot escape. This is obtained by the use of perineal or ischiatic crutches. It has been my practice to use that form of ischiatic crutch known as the Thomas knee splint. This brace consists of an oval foot-piece supporting two uprights, which when fitted to the patient passes parallel and close to the inner and outer surface of the limb, the inner bar passing as high as to the perineum, the outer bar to above the head of the femur. The two upper extremities of these bars are welded to an irregular ovoid ring which obliquely encircles the thigh. When finished, this upper ring is padded with felting and is covered with leather, thus being fitted to support the weight of the body. The brace is made long enough to pass two to four inches below the heel, the other shoe being built up this same amount. The limb is held fixed in the brace by buckles and straps, and in walking the brace is lifted and kept against the perineum by means of a suspender fastened to buckles attached to the upper ring.

5. *Extension* and protection may be furnished by the use of a walking brace after the pattern of the Sayre hip splint; or by the use of adhesive plasters attached above the leg, and below to buckles secured near the bottom of the Thomas knee brace. For my own part I cannot report great satisfaction from the use of extension in tumor albus. In certain cases, after very careful adjustment I have found it inadequate, and have in these cases given it up.

5. *Rest.*—In certain very acute cases, extension in bed along the line of deformity is found to be the only efficient and appropriate treatment.

6. *Correction* of *deformity* may be obtained by various adjustable splints which are usually manipulated by means of screws or buckles and straps. Probably as simple a device as any for correcting flexion at the knee is the Billroth splint, which is inexpensive, easily made and readily adjusted. It consists of two hinged iron strips attached to broad tin plates which are incorporated in a plaster dressing to the limb. A fenestrum in the plaster is left in front, while posterior to the knee it is made three-fourths of an inch thick, and is cut through transversely while hardening. On straightening the knee a gap is thus left posteriorly, into which pieces of cork are inserted, preventing a return of the flexion. I wish to put myself on record as agreeing most heartily with Dr. Ridlon in the belief that rapid reduction of deformity should be made, and that, as he says, "The sooner you correct your deformity the sooner you begin the cure." I have found that you may by the use of the Billroth splint correct the deformity five to ten or more degrees, the pain from the procedure passing off within a few minutes, and in three or four days you may repeat the same process, thus continuing until the limb is straight.

(b) *Operative Treatment.*—The operative measures which I shall consider are:

I. *Correction of Deformity* by

1. Tenotomies,
2. Brisement Force,
3. Osteotomy,
4. Resection.

II. *Aspiration and Parenchymatous and Intra-Articular Injections.*

III. *Erasion.*

IV. *Excision.*

V. *Amputation.*

1 and 2. Many surgeons, for reasons of their own, prefer to correct flexion at the knee by dividing the hamstring tendons, and, should this alone not be sufficient, by the use of *brisement force.* In performing this operation care should be taken to avoid the popliteal artery and peroneal nerve. With the present aseptic methods an open incision would be on the whole safer and will give in the end just as good results. The

amount of force used in the redressment must be determined by good judgment, for by the use of too much force considerable damage may be done to the joint, and even the popliteal artery may be torn ; this latter accident has been reported by a member of the American Orthopædic Association. As for myself, I have found that those cases where tenotomies are suggested are readily straightened by the Billroth splint, without undergoing the dangers of an anæsthetic.

3 and 4. Where there is bony ankylosis with deformity, an osteotomy or resection is indicated. Where the deformity is of a moderate amount, say, 135°, a femoral osteotomy is quite satisfactory ; but with a deformity near 90°, the correction requires the fragments of the femur to be brought to such an acute angle that the limb is not a good weight-bearing member. In such cases the resection of a wedge of bone is clearly the better operation.

II. *Aspiration, etc.*—If there are evidences of pus having formed in a case of knee-joint disease, the treatment *par excellence* at this stage is the withdrawal of the pus by aspiration, followed by a thorough washing out with a five per cent. solution of boric acid, and then the injection of a ten per cent. emulsion of iodoform in glycerine or pure olive oil. Recently I cured a large hip abscess by four or five of these injections, having previously aspirated.

Under the heading "Iodoformization of Abscesses," Dr. Senn, in his work on Tuberculosis of Bones and Joints, says : (p. 375) ". . . . . No modern progressive surgeon, at the present time, would entertain the idea for a moment of resorting to operative procedures without giving this method of treatment a fair trial. I regard this treatment as one of the greatest advances in the struggle against tubercular affections of inaccessible bones like the vertebræ. In my own hands it has yielded brilliant results that without it would certainly have been hopeless. I have seen iliac, lumbar, and psoas abscesses the size of a child's head, in communication with tubercular disease of the vertebræ, definitely heal after three or four evacuations followed by irrigation and injection of a ten per cent. emulsion of iodoform in glycerine."

This same author also praises very highly the parenchymatous injection of the same emulsion during the initial stage of the disease, *i. e.*, when it is osseous in origin, and before the joint cavity is affected. This he accomplishes by a trocar and cannula, which is made to penetrate the bony shell over the osseous abscess, or tubercular focus, then through the canula is forced the emulsion into the cancelli of the bone. I have had no experience with this method of injection, but intend making use of it in the future.

III. *Erasion.*—After having given conservative treatment a thorough trial in the case of a suppurating knee-joint, the question of excision or erasion comes up. Erasion should certainly be given a trial in the case of a child under twelve years old, when there is a prospect that in so doing much shortening of the limb may be prevented, and where the destruction of joint tissue is not too great. Not long since a case came under my notice where a complete excision of the knee was done upon a child four years old, suffering from white swelling, but without sinus or abscess. The shortening will surely be from eight to twelve inches. I consider excision in such cases as bad surgery.

IV. *Excision.*—This procedure should be reserved, ordinarily, for children over twelve years old, where suppuration has been prolonged, and there are evidences of considerable dead bone. Even then we are frequently justified in prolonging conservative measures until the child gets its growth, in the meantime, the life of the patient is threatened.

V. *Amputation.*—Amputation is, of course, a last resort, but in the case of adults with prolonged suppuration from an extensively diseased joint, it may be the wisest measure. I have amputated at the upper third of thigh in the case of a young man 18 years old, with a long-standing suppurating knee, and at the time of the operation there was discharge from seven sinuses. I did not strike healthy bone until I reached the upper third of the thigh. The young man is now perfectly well and healthy.

Statistics of Final Results.—Early in the spring of 1890, when the writer was House-Surgeon of the Hospital for Ruptured and Crippled, New York City, Dr. V. P. Gibney, Surgeon-in-Chief to that institution, began the investigation of final results obtained in the treatment of white swelling. Dr. Gibney, assisted by Dr. P. H. Fitzhugh, continued the investigations for about two years, obtaining notes on 499 cases, which included those patients applying for treatment since 1868, but not later than November 14, 1887. As I saw many of these cases I feel that I can speak intelligently on the subject. Dr. Gibney divides these patients into three classes, according to the treatment they had received, as follows :

1. Those receiving the purely *expectant* treatment, which means the treatment of symptoms with little reference to signs, little reference to correction of deformity, and between exacerbations no treatment ; the irregular use of apparatus, with frequent changes in the appliance used.

2. The *fixation* treatment, which in this case was the use of immobilizing dressings and the Thomas knee brace.

Of the 499 cases, 223 were females and 276

males. Of 387 cases analyzed in regard to age, 197 or nearly 51 per cent. developed the disease before 5 years of age; 142 or 36 per cent. between 5 and 10 years of age; that is to say, in 339 cases or 87 per cent. the disease developed before the 10th year. Complete histories were obtained in 300 cases; of these 140 or 46 per cent. had abscess; the mortality from the disease is given at 7⅓ per cent.

Of 71 cases recorded as treated by the expectant plan, 3 died, 2 of which were from the disease; 5 came to excision, 3 to amputation, and 60 remained with fair results. In 190 cases, under the fixation treatment, there were 35 deaths, 20 of which were traceable to the disease itself (about 10 per cent.); 9 came to excision, 1 to amputation, and 145 remained with more or less fair results. Only 39 were subjected to the protective or Thomas treatment. Two died from causes in no way connected with the disease itself; 37 remained with good results.

Analysis as regards motion.—Among 23 suppuration cases—treated by the expectant plan—14 had motion, 9 were ankylosed. Among those with out abscesses (37 cases) 30 had motion 7 were ankylosed.

Under the fixation plan (63 cases where abscess had occurred), 43 retained motion, and 20 were ankylosed; 82 cases without abscess—70 had motion, 12 had no motion.

In 19 cases under the protective plan, where abscess occurred, 16 had motion and 3 were ankylosed. Where abscess did not occur (18 cases) all had motion, none were ankylosed.

A summary of the above is as follows: Of 60 cases under the expectant plan 60 per cent. had motion. Of 145 cases under the fixation plan 76 per cent. had motion. Of 37 cases under the protective plan 95 per cent. had motion.

The position of the limb.—Of 227 cases only 15 recovered with a deformity at an angle under 135°, and 131 had an angle of a deformity not less than 165°; this enabled them to walk with their limbs practically straight, and with scarcely an appreciable deformity.

Gentlemen, who among you can report final results in as many as 37 cases of tumor albus treated under any other than the protective plan, with no mortality and with 95 per cent. retaining motion in the joint?—Wm. E. Wirt, M.D., in *International Journal of Surgery.*

IT has been computed, *Scientific Am.*, that the death-rate of the globe is 68 per minute, 97,790 per day, or 35,717,790 per year. The birth-rate is 70 per minute, 100,800 per day, or 36,817,200 per year, reckoning the year to be 365¼ days in length.

THE DISEASE OF INEBRIETY: SPREEING AND TIPPLING.

A not uncommon form of the tendency of inebriety is manifested, especially in young men, in whom the propensity is not fully developed. This consists in the practice of occasional "spreeing," as it is sometimes termed. This forms one of the earliest stages of the habit or attack, and may be properly termed the formative stage. It makes its appearance on occasions of rejoicing, at festivals and celebrations, on Fourth of July and during the holidays. At other times the propensity is dormant, and the individual is in no way affected by it. There is a feature in this malady, which may be properly noted in this place, and that is that in the advanced stages of the disease nothing satisfies but complete intoxication. So completely is the system under the influence of the morbid propensity, that the desire to get drunk is irresistible. No lesser degree of exhilaration or excitement answers—nothing but total obliviousness satisfies the craving propensity.

Inebriety makes its appearance as other diseases make theirs, sometimes by the faults of the individual attacked and at other times from causes over which he has no control. The propensity is quite often hereditary, and transmitted from one generation to another, in accordance with the same law by which any constitutional taint, like scrofula or tubercular disease is handed down. The law of development which, from the germ, fashions and matures an individual, and by which it is made to resemble its prototype or parents, will also in due time bring forth the defects which may have existed in a previous generation. The fact is a familiar one, that children resemble their parents to a certain extent in mental characteristics, disposition, peculiarity of constitution, temperament and form. They are, however, not born with all these characteristics present, but as the child is developed into the man they, one after the other, make their appearance. With the development of consumption under this law we are all familiar. The child is born with a tuberculous taint. During the years of its childhood it may be well and sprightly, keep pace in growth with the most robust; but in the course of its development it reaches a point where its prototype fell into decay and died. This individual will do the same. A tendency to drunkenness will be developed under the same general law. The child will give the fairest promise, its youth will be one of innocence uncontaminated by evil influences, and the first years of manhood will be free from spot or blemish; but the critical period arrives and suddenly like a fatal cancer

there is developed this morbid propensity. The man becomes changed, his appetites are aroused, his whole nature undergoes a transformation, and the prospect of his early years is blasted by drunkenness. No condition in life is exempt from such instances. We meet them everywhere, in the pulpit, on the bench, at the bar, in the church and among "all sorts and conditions of men." The period in life at which the propensity to drink is developed varies in different individuals. In some it appears in early youth, in others in the first years of manhood. The great number of young men addicted to the intemperate use of ardent spirits, who are to be found in our large cities and principal towns, are examples of this class. Cases also occur where late in life the propensity first makes its appearance. Other forms of drunkenness are apparently brought on by disturbances or by great excitation of the emotional nature, or by the depressing passions, especially by grief, disappointment, mortification, shame, or loss of property, etc. In many cases the exultation following the accomplishment of some successful undertaking excites a paroxysm of inebriety. I have been led to believe that this form of emotional excitement is more frequently the immediate cause of an attack than those disturbances attended by depression of mind. The rapid accession to fortune, political distinction, success in any enterprise, are very often precursors and excitants to a course of inebriety.

The practice of tippling has heretofore been regarded not only as the ordinary but the sole cause of the development of inebriety. In fact, every case formerly was attributed to this practice. Under this view the individual was looked upon as voluntarily entering upon a habit which was sure to bring upon him a drunkard's fate. This practice has consequently been denounced as criminal, and the drinker been subjected to the severest reprobation. The courts have held that the delirium of intoxication was no excuse for violence or crime of any kind, for the condition was brought on by the voluntary act of the individual himself. It must be evident, however, that this practice is but the first manifestation of the morbid propensity, and is as much a part of methomania as is the consequent continuous or inveterate stage. The inclination to tipple, whenever occurring, should consequently be regarded with alarm, as indicating the approach of a most serious and grave disease. Measures to arrest its advance should at once be employed, as any sanitary precautions are taken to prevent the approach of yellow fever or cholera. It is in this stage that recovery is most likely to take place, for the disease is then only in process of formation and it is more easily thrown off. The will then has not become weakened or overpowered and the recuperative energies of the system have not been impaired.

In that form of inebriety which has been attributed to the influence of emotional disturbances, it may likewise be doubted whether these influences are the direct cause of the paroxysms; they only operate as exciting causes, and by their influence upon an organization already predisposed, weaken the power of resistance, and give favorable opportunity for the development of the disease. We have all seen individuals drawn into the vortex and swept away under disturbances of the emotions and passions, and this is no more strange than that the same causes should, in others, disorder the intellect, destroy its balance and overwhelm its faculties; occurrences which I believe are not uncommon. Do not both these conditions equally claim our sympathy and benevolent exertions? Is one wicked while the other is properly regarded as unfortunate? In all of these cases, both of methomania and insanity, we must recognize a previous predisposition to the attack. The fact that many undergo all these emotional disturbances and excitement without developing either drunkenness or derangement of mind, is conclusive that they alone are insufficient. There is a previous susceptibility to these attacks which must be regarded as unsound and morbid.

It may be remarked as to the effects of this disease upon the character of the individual, and its influence upon the moral and affective faculties, without reference to any consequent organic lesions or functional derangement, that the tendency of the practice of drinking is to obscure and destroy all the higher and nobler impulses of human nature, and in prolonged cases, where the disease has wrought out its full effects, the subject of it may become completely debased and lost. Under every circumstance the effects of alcoholic indulgence are dire enough, as we all must admit, yet I believe that we have been accustomed to regard the drunkard as lost, too soon He is not always, in fact, I believe that he will rarely be found to have become utterly abandoned. I do not believe that, even in the worst cases of inebriety, one's manhood is entirely obliterated. It is often completely overborne by the power of that terrible propensity to drink, so that no signs of its existence are put forth; but give it the opportunity, let an opening once be made in the prison house in which it is incarcerated, and the soul and the higher instincts of the man would spring forth once more, like a bird escaped from its cage, to enjoy again their freedom and a new life.

The whole subject is one of engrossing interest. Upon the medical profession will devolve the duty of treating the subject in the light of true science, in the hope and belief that, as variola has been or can be rendered harmless by vaccina-

tion, so the proper employment of remedial measures may exterminate or at least make powerless for evil, the fearful scourge of inebriety.

Elsewhere, Dr. Burr says: "It is this condition of the nervous system calling for alcoholic stimulants that is essentially the disease. This condition begins when the first inordinate desire is experienced. The intensity of this desire, whether it be mild or virulent, does not change its character. The slightest departure from a normal appetite indicates the beginning of inebriety. The first unnatural longing for drink is essentially of the same nature as the most inverterate and uncontrollable desire. The difference is only in degree.

"The medical profession must study this subject as physiologists and pathologists, and not as moralists or reformers. The laws governing the organism, the dependence of a healthy mind upon a healthy physical condition, the transmission of normal sensations only through the media of sound nerve trunks and *vice versa*, are well determined facts, and they must be recognized and applied in the consideration of the subject of intemperance, and in explaining the unnatural phenomena of the inebriate."

The late Dr. D. G. Dodge, one of the trustees and formerly superintendent of the New York State Inebriate Asylum, at Binghampton, N. Y., some years ago expressed himself as follows, in a paper on "Inebriate Asylums and their Management": "Inebriety is a condition of the system exhibiting a class of symptoms resulting from a long-continued and excessive use of alcoholic stimulants, which brings the subject to a condition he is too weak to overcome and for which he is not responsible. All stimulants containing alcohol must produce this disease; but those containing the most alcohol, when habitually taken, act more thoroughly and rapidly. It is alcohol and nothing else that is the exciting cause of the disease. Occupation has a powerful controlling influence in developing or warding off the disease. In-door life in all kinds of business is a predisposing cause, from the fact that nearly the whole force of the stimulant is concentrated and expended upon the brain and nervous system. A proper amount of out-door exercise, or labor, tends to throw off the stimulus more rapidly through the various functional operations of the system. Occupations of all kinds, mental or muscular, assist the nervous system to retard or resist the action of stimulants—other conditions being equal. Want of employment or voluntary idleness is the great nursery of this disease. The use of tobacco predisposes the system to alcoholism, as it has an effect upon the brain and nervous system similar to that of alcohol. The use of tobacco, if not prohibited, should be discouraged."

Statistics show that inebriety oftenest prevails between the ages of 30 and 45. The habit seldom culminates until 30, the subject, to this age, generally being a moderate drinker; later in life the system is unable to bear the strain of a continuous course of dissipation. Hereditary inebriety, like all transmissible diseases, gives the least hope of permanent cure, and temporary relief is all that can generally be reasonably expected.—Dr. E. C. Mann, in *Gaillard's Med. Jour.*

PSEUDOCYESIS—SPURIOUS PREGNANCY.

I had hoped to show you to-day a case which is of unusual interest and of the utmost rarity. The patient will, I think, come hither sooner or later, because she is convinced I am wrong as to her state, and because Professor Hirst, whom I shall ask to see her, will agree with her and disagree with me. Moreover, she is hysterical and inclined to exhibit herself. I shall not wait for her return, as it may never happen, but take her case as a text or an excuse for dwelling on a subject of interest to both the obstetrician and the neurologist.

I find it somewhat hard to fit her case and others like it with a label. If I call it simulation of pregnancy, that would be near to a satisfactory name; it would not fully satisfy me. As usual, I should have to qualify and explain it. Perhaps it were well to leave the matter until I have stated some illustrative examples. Before doing so, I shall give an outline, so to speak, a delineation of the interesting condition for which I wish to claim your attention.

A woman, young, or else it may be at or past the climacteric, eagerly desires a child, or is horribly afraid of becoming pregnant. The menses become slight in amount, irregular, and at last cease or not. Meanwhile the abdomen and breasts enlarge owing to rapid taking on of fat, and this is far less visible elsewhere. There comes with this excess of fat the most profound conviction of the fact of pregnancy. By and by the child is felt, the physician takes it for granted, and this goes on until the great diagnostician, Time, corrects the delusion. Then the fat disappears with remarkable speed and the reign of this singular simulation is at an end. When I describe one or two of these cases you will, I fancy, agree with me that the subject is worth discussing.

Perhaps the cases may be more common than I think they are. As a consultant I might rarely hear of them. The general physician and obstetrician are more liable to encounter them, and yet they must be uncommon. Some years ago I had asked Dr. Duer if he recalled the two or three

cases of this nature sent to him by me. He said yes, and that he had also met with one or two others. Shortly after this I was consulted by a lady in regard to a woman of thirty years of age, a nurse in whom she was interested. This person had been married some three years to a very old man possessed of considerable estate. He died, leaving his wife her legal share, and the rest to distant cousins, unless the wife had a child. For two months before he died the woman, who was very anæmic, ceased to menstruate. She became sure that she was pregnant, and thereupon took on flesh at a rate and in a way which seemed to justify her belief. Her breasts and abdomen were the chief seats of this overgrowth. The menses did not return, her pallor increased; the child was felt, and every preparation made for delivery. At the eighth month a physician made an examination and assured her of the absence of pregnancy. A second medical opinion confirmed the first, and the tenth month found her of immense size and still positive as to her condition. At the twelfth month her menstrual flow returned, and she became sure it was the early signal of labor. When it passed over she became convinced of her error, and at once dropped weight at the rate of half a pound a day, despite every effort to limit the rate of this remarkable loss. At the end of two months she had parted with fifty pounds and was on the whole less anæmic. At this stage I was consulted by letter, as the woman had become exceedingly hysterical. This briefly stated case, which occurred many years ago, is a fair illustration of my thesis. Another instance I saw when in general practice. A lady who had several children and suffered much in her pregnancies, passed five years without becoming impregnated. Then she missed a period, and had, as usual, vomiting. She made some wild efforts to end her supposed pregnancy, and failing, accepted her fate. The menses returned at the ninth month, and were presumed to mean labor. Meanwhile she vomited up to the eighth month and ate little. Nevertheless she took on fat so as to make the abdomen and breasts immense and to excite unusual attention.

No physician examined her until the supposed labor began, when, of course, the truth came out. She was pleased not to have another child, and in her case, as in all the others known to me, the fat lessened as soon as the mind was satisfied as to the non-existence of pregnancy. As I now recall the facts, this woman was not more than two months in getting rid of the excess of adipose tissue.

Dr. Hirst tells me he has met with cases of women taking on fat with cessation of the menses, and in which there was also a steady belief in the existence of pregnancy. He has not so followed up these cases as to know if in them the fat fell away with speed when once the patient was assured that no child existed within her. My much regretted friend Goodell, promised me the detailed account of at least two examples having precisely the sequence of symptoms I have described.

These women are in no sense of unsound mind, nor is their illusion to be classified with the delusory and obstinate belief as to their pregnancy held by some of the insane. These latter persons may be virgins or not. Sometimes the idea has arisen in connection with uterine symptoms, or else is the outcome of some exposure to the creation of pregnancy and alarm at a possible but non-existent pregnancy. Many of these people hold to the notion for years. Dr. Hirst recalls to me the story of Dupuytren, who, when consulted for such a case of eighteen years' duration, advised the woman to swallow a private tutor. It is said to have cured the case, which I much doubt. I knew of one instance in which a physician etherized such a case, and assured the woman he had taken away a dead child. This answered for a week, and then she confided to him her regret that he had not taken away the other, as now she knew they were twins.

The delusion of pregnancy in the insane is neither created or kept up of need by excess of flesh or failure of menstruation. No such food for fancy is needed. It defies the contradictions of time and the popular knowledge of physiology

The illusion of the patients I describe is inevitably destroyed by time and adverse circumstance.

I can find no mention anywhere in literature of cases like those I have described. Perhaps I may have overlooked them or they might be found on more careful search. Yet, after inquiry of men with the large experience of Goodell and Duer, I am forced to believe them exceptionally rare.

A woman who is emotionally eager to have or not to have a child; one with the unsatisfied craving for motherhood, or one who has been fearfully tormented in her pregnancies—these, I think, are the class of women liable to this complex group of symptoms. More rarely it is a woman long childless, who somewhat early and suddenly ceases to flow, and, as is not rare at the climacteric, puts on flesh very rapidly. The illusion of pregnancy is in such females a flattering one.

The other cases are the more interesting. The woman has naturally and too constantly dwelt, with disappointed hope or abiding fear, on the loss or delay of the periodic bleeding. Then she becomes more gladly sure or more alarmed, as the case may be, as she gains flesh especially abdominal fat. Is this gain in flesh an accident of nutrition which combines, with lessened or absent menstruation, to give and sustain her growing illusion as to pregnancy? Women, as I long ago remarked in my book on *Rest Treatment*, are

easier to fatten than men; also in them gain or loss of adipose tissue is more common than in the other sex, and less significant as to health or of pathologic disaster. The point as to which I remain in doubt is as to whether belief in the presence of the pregnant condition in anyway influences the really singular gain in fat seen in certain of these cases. Whether it is, as I said, coincident, and assistant of belief, or whether it follows that mental state, I do not know. Some women thus deluded are when once assured of pregnancy, likely to be careful to exercise less than usual, and acquire, like some pregnant women, excessive appetites. Also it is quite sure that once they are convinced of their delusion they lose flesh very speedily, and this, too, may be in a measure due to a return to normal habits. Still there remains for us the unsolved problem of how much the mind has to do with the gain and loss of weight. The first of these cases I ever saw was brought to my knowledge in a singular way: A woman had given birth to two female children. Some years passed, and her desire for a boy was ungratified. Then she missed her flow once, and had thrice after this, as always took place with her when pregnant, a very small but regular loss. At the second month morning vomiting came on as usual with her. Meanwhile she became very fat, and as the growth was largely, in fact excessively, abdominal, she became easily sure of her condition. She was not my patient, but her husband consulted me as to his own morning sickness, which came on with the first occurrence of this sign in his wife, as had been the case twice before in her former pregnancies. I advised him to leave home, and this proved effectual. I learned later that the woman continued to gain flesh and be sick every morning until the seventh month. Then menstruation returned, an examination was made, and when sure that there was no possibility of her being pregnant she began to lose flesh, and within a few months regained her usual size.

The sympathetic vomiting of the husband is an interesting subject to which I called attention some years ago in my lectures on nervous maladies.—Dr. Weir Mitchell in *Med. News.*

UNFAVORABLE REPORT ON ANTITOXIN.—After a thorough study in various hospitals of Berlin of the use of Behring's diphtheria-serum, Passed Assistant Surgeon F. J. B. Cordeiro, U. S. N., in a report to the Surgeon-General of the Navy, concludes that so far proof is lacking of the value of antitoxin in the treatment of diphtheria. Dr. Cordeiro adopts the following opinions of Kassowitz: "1. A large number of children treated with both small and large immunizing doses have within a few weeks acquired diphtheria, and some of them have died of it. We do not possess a single scientific proof that a case of diphtheria was ever prevented by the immunizing process. 2. Children who during a first sickness have been treated with large doses of serum have a short time after acquired diphtheria anew. They were not rendered immune either by their sickness or the largest doses of the antitoxin. 3. In a large number of cases children have been treated on the first or second day of their illness with the fullest doses of the antitoxin and have died. 4. It is certain that a large part of those who have died notwithstanding the serum treatment did not die from the effects of a mixed infection, but directly from the specific effects of the Loeffler bacillus. 5. Heart and other post-diphtheritic paralyses are also seen in early and fully treated cases, and they occur as often as they did before the serum treatment. 6. Of a fever fall by crisis in the first twenty-four hours, and of a pronounced antipyretic effect of the serum, most observers have seen nothing or next to nothing. 7. The separation of the membrane follows in the cases that run a favorable course in the customary manner. But often there is an extension of the local process, and a renewal of the already separated membranes during and after the serum treatment.

"The burden of proof lies with Behring and his co-workers. The world will eagerly and only too willingly receive this proof. We know that the former extravagant promises are out of the question, but we should be grateful to have it demonstrated that the serum can reduce the mortality by even one per cent. As yet we have not the slightest basis on which to found an expectation that fewer children will die in the future of this disease on account of the serum treatment."

Dr. Cordeiro's paper will be published in full in the next annual report of the Surgeon-General of the Navy.—*Medical Record.*

DISSOLVED in the "Wine of Cod Liver Oil" (Stearns') are the active principles of Cod Liver Oil, to the exclusion of the oil itself—a statement which a somewhat extended examination has to some extent confirmed. Thus on extracting the wine with ether and carefully treating the ethereal extract (which is an oily, brown, resinous body, having a peculiar fishy smell) with a strong sulphuric acid solution of glucose, the beautiful purple reaction characteristic of biliary constituents is obtained. The same reaction is effected when the extract used in the preparation of the wine is similarly tested, but to a more marked degree. Recent investigation has led to the isolation of several distinct bodies in Cod Liver Oil, notable amongst which are the alkaloids aseline and morrhuine, in association propably with morrhuic, formic, butyric, and phosphoric acids.

These principles have been tested clinically, and the results formed the subject of an exhaustive report by Gautier and Mourgues in the *Journal de Pharmacie*, March, 1890, who concluded that the combined active principles of Cod Liver Oil act as powerful stimulants of nutrition and assimilation, and show definitely the nature of the principles to which the oil to some extent owes its valuable medicinal properties. The wine evinces an acid reaction, is alcoholic, and contains also Peptonate of Iron.—The *Lancet* (London Eng.), July 7, 1894.

CONTRIBUTION TO THE ETIOLOGY OF GENERAL PARALYSIS.—Dr. Theodore Kaes, in a recent report gives the following statistical information concerning the percentage of cases of general paralysis among the inmates of the Hamburg asylum. From January 1, 1870, to December 31, 1889, there were admitted to this asylum, 9,148 patients, of whom 4,970 were males, and 4,178 were females. Of this number, 1,412 suffered from general paralysis, or about 15.44 per cent. of the entire number; the percentage for males being 21.99 per cent., and for females 7.55 per cent. Among the patients who left the asylum during same period, 22.74 per cent. of the men and 7.39 per cent. of the women were general paralytics. This would make the general average for both sexes 15.485 per cent.; for the males, 22.365 per cent. and for the females, 7.47 per cent. These statistics correspond very closely with those given by Prof. Mendel, as the collective statistics of German asylums. An important point in which the present writer differs from Mendel, is the proportion of males to females. Mendel gives the proportion 5 to 1, while Kaes' observation shows a proportion of 3.44 to 1. Dr. Kaes also gives statistics showing that there has been an absolute as well as a relative increase in general paralysis in Hamburg from 1870 to 1890, the increase varying in different years. The most important factor in the etiology of the disease is, in his opinion, excess in taking stimulants; next to that heredity, syphillis, and the tabes dorsalis. Head injuries, acute infectious diseases, etc., which are often given as causes, he does not think, have a very intimate etiological relationship. It would seem that in women the age of the patient is younger, when the general paralysis first shows its development than it is in men, which is on account of the important parts prostitution and alcoholic excesses play as etiological factors of the disease in women. —*Allg. Zeitschr. f. Psychiatrie.—N. Eng. Med. Month.*

ELECTRICAL TERMS.—The "volt" is the unit of measure of electro-motive force which will circulate a current of electricity of one "ampeer" through a resistance of one "ohm."

The "ampeer" is the unit of measure of the volume of the "volt" or "strength" of a current. The "ohm" is the unit of measure of the resistance of the circuit.

The number of ampeers flowing through any circuit is equal to the number of volts of electro-motive force, divided by the number of ohms of resistance in the entire circuit. (Ohm's Law.)

The term "electro-motive force" is used to designate the pressure or head under and by virtue of which an electric current circulates. This is created by a "difference of potential" causes, from the two sides of the source of supply.

"Difference of potential" corresponds to a difference in level in hydraulics or a difference in temperature in thermo-dynamics. A current will flow from a higher or "positive" potential to a lower or "negative" potential, as there exists a difference of potential.

The "coulomb" is the established unit of measurement of the quantity of the current, and its value is equal to that quantity of electricity which will flow through or into a body when one ampeer of strength flows for one second of time.—*Albany Med. Annals.*

FISTULA IN ANO. — In doing a radical operation for fistula the following points, according to Dr. J. H. Bacon, should be observed:

1. Never sever the sphincters at more than one place at the same operation, no matter what the complications may be, otherwise incontinence is sure to follow.
2. Unless all the channels are followed up and laid open, the operation will fail of its purpose.
3. Fistula resulting from tubercular abscess must not be operated upon if there is sufficient tissue destruction of lung to produce hectic, fever, sweats, etc., unless the fistula is causing severe painful spasms of the sphincters, then it should be divided at any stage.
4. After laying the fistula tract open, the wound must be made to heal from the bottom, and as the cutaneous or mucous side of the wound is better nourished it will throw out a more healthy granulation, that tends to bridge over and close the slower granular surface at the bottom, thus leaving a fistula remaining.
5. When the fistulous tract is not too complicated it should be dissected out entire and the wound brought together, beginning at the bottom with continuous catgut sutures and approximating the surfaces in successive layers until the whole wound is closed.—*Northw. Med. Jour.*

BITING THE NAILS.—Dr. Bérillon, as the result of an extensive inquiry, confirms his previously expressed opinion that onychophagia and similar habits are generally associated with degeneracy.

The frequency of onychophagia varies greatly in different institutions. In some, two or three out of every ten children are addicted to biting their nails. A careful examination invariably reveals signs of degeneracy. The children are usually less healthy in appearance than others, presenting deformities of the skull and anomalies of the teeth and ears. In such subjects the teachers notice a marked antipathy to physical exercises and games requiring effort. They write poorly, and show marked inferiority in respect of manual dexterity. They are slow to learn; they are incapable of continuous application; in fact, they always exhibit an inferiority in some direction or other. The disciplinary measure usually resorted to to correct bad habits are powerless in this; in the majority of cases only *hypnotic suggestion* seems to be capable of affecting a cure. The habit of biting the nails sometimes persists until late in life.—*Med. Week.*

UNHEALTHY FEARS, OR PHOBIÆ. — Macbeth "supped full with horrors." But could he return and live in modern times, he might even have a richer banquet than his first; for a Frenchman, M. Gelineau, has just published a volume upon "Unhealthy Fears, or Phobiæ." These curious and uncomfortable states of mind were first described by Benedict and Westphall; but there are many species, and M. Gelineau has carefully compiled a complete list for the benefit of his shuddering and yet fear-bound reader. They are aichmophobia, or fear of sharp points, as of needles or pins; agoraphobia, or fear of open spaces, with a sub-variety, thalassophobia, or dread of the ocean; astrophobia, or fear of the stars and celestial space; claustrophobia, or fears of enclosed spaces; mysophobia, or fear of filth; hæmatophobia, dread of blood; necrophobia, or horror of dead bodies; thanatophobia, or dread of death; anthropophobia, or fear of crowds; monophobia, a fear of being left in solitude; bacillophobia, or fear of microbes; siderodromophocia, or dread of railways; pathophobia, or fear of disease—with many subdivisions, of which the most important and most frequent are anginophobia (fear of angina pectoris), ataxophobia, syphilophobia, lyssophobia (or fear of rabies), spermatophobia and zoophobia (or fear of animals), which in its turn has subdivisions for cats, dogs, horses, mice, etc., ad totum catalogum animalium. Returning to the list, we find still kleptophobia, fear of becoming a kleptomaniac; pyrophobia, fear of matches; stasophobia, dread of standing upright; æroph hobia, or dread of draughts of air; ocrophobia, fear of high places; toxicophobia, a fear of poisons; demonnophobia, a dread of the devil (this is rather rare). There are also a very great number of phobiæ peculiar to certain professional persons—as physicians, artists, merchants—which have yet to be Hellenized and classified. The culminating fear, however, the quintessence of dread, is the fear of having a fear, the dread of having a dread, or phobophobia.—Ed. in *Boston Med. and Surg. Jour.*

WALTER W. S. CORRY, M.D., L.R.S.C., I. & C., Rosedale Abbey, Pickering, Yorkshire, England, writes: "I have used IODIA, and am satisfied that it is a very powerful alterative, and a great improvement on the old combination of iodide of potassium and sarsaparilla, the latter drug itself being most doubtful in its effects, while the preparation is valuable also as a diuretic, a thing of no small consideration in most of the diseases in which it is indicated.

J. E. O'CONNOR, M.B., B.Ch., Leicester, Eng., says: "In a case of urethritis accompanied by cervical cystitis and urethral synovitis the administration of Sanmetto was attended with most satisfactory results. The drug appears to relieve the pain, reduce the irritation, and produce healing and cessation of the mico-purulent discharge more speedily and efficiciously than any other remedo. . . ."

THE SCHEMING MICROBE.

A microbe sat on a maiden's lip, right on its kissiest part,
And murmured, "I'll work that young man off in the highest style of art:
I'll send a raging colony careering through his veins,
And they shall soak his system with a choice lot of ptomaines.
"O, I'm of the choleraic sort and the epidemic brand,
And you may bet the victim knows whenever I'm on hand;
For I raise a rumpus in his guts, like a slowly bursting bomb,
Which only ends as a general thing, when he reaches kingdom come."
Now, him that the grizzly microbe had in its measly, pizen mind,
Was a nicish, youthish laddie of the hottest blooded kind;
Who loved this sweetish, youngish girl with an incandescent vim,
Which only found an offset in the way in which she loved him.
Well, on the next sweet Sunday night, this nicish, youngish man
Was seated on the same chair with his darling Mary Ann;
And he hugged her until he nearly busted her precious diaphram,
And kissed her sixteen hundred times with a zest of a battering ram.
The microbe had been swapped at least one thousand times, and when
The young man left the ornery beast was still with Mary Ann;
When her beau was gone she finished up by kissing "Puggy Wee,"
And the next day that devoted pup most died of diarrhee.

—W. C. Cooper, in *Medical Gleaner.*

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3. A still stronger serum, of 1500 antitoxin units, for exceptionally severe cases. Of this strongest grade our supply for the present will be limited. Issued under **green label;** price per vial, $5.25, strictly net cash.

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AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; Canadian Advertising Agency, 60 Watling St London. 5 Rue de la Bourse, Paris.

TORONTO, JUNE, 1895.

Editorial.

THE CONSUMPTIVES' HOME.

Through the generous action of one of Toronto's citizens, Mr. W. J. Gage, the authorities have taken into consideration the establishment of a home for patients suffering from phthisis. In this they show much wisdom. It needs no lengthy argument to impress every member of the profession with the necessity of such an institution for the relief of many subjects suffering from this disease.

In the treatment of a disease, notably effected favorably or otherwise by climatic conditions, those having to do with the choice of a site can not be unduly careful in making their selection.

The advantages to a patient, of the regular life of a Sanitarium, its early hours, plain food, regular medical attendance, amusements, freedom from business cares, etc., are great; but an unsuitable climate would more than counterbalance all these in the case of consumptives.

Volumes have been written on the kind of climate most favorable to pulmonary complaints, and nearly every physician has his own ideas upon the subject. Our own North-West holds a favorable place amongst others, suitable for the residence of sufferers from chest troubles, and if the authorities go through with the proposed scheme, some point easy of access, no doubt on the line of the C. P. R., will be chosen.

We have received a pamphlet prepared by Drs. Furrer and Lambert, of Kamloops, B. C., setting forth the advantages of that town as a site for the proposed Sanitarium. It would seem that the idea of establishing such a Home at Kamloops is not a new one, vital statistics, averages of temperature, etc., having been collected and published as long ago as 1890.

The certified report shows that Kamloops is almost free from zymotic diseases, and that the death-rate among children is practically *nil*. The water of both rivers is remarkably pure, and extremes of cold are far less than in Manitoba and the North-West. The heat of summer is always tempered by cool nights. From a perusal of the testimony presented in the report, we are inclined to think that no more favorable situation exists in Canada, and certainly not on the line of the C. P R., for the location of this proposed Home, which we sincerely hope may soon be materialized, to the comfort, health and hope of hundreds of sufferers now practically hopeless.

THE LIABILITY OF HOSPITALS FOR MALPRACTICE.

It would seem at first blush so obviously unjust that patients receiving free aid at an hospital or dispensary should presume to ask for damages and make allegations of malpractice that the necessity for a law on this subject would not appear. The experience of numerous hospitals in the United States, as well as that of our own General Hospital, is that not only will patients accept of gratuitous aid but will take the earliest opportunity to set up a claim against either the institution or the unfortunate member of the staff under whose care the plaintiff was placed. It is a fact which cannot be gainsaid that every ordinary care is exercised in cases which are admitted to hospitals. These cases are not the most dangerous from a medico-legal standpoint, because a careful record is kept and much is known one way or another of the patient. But in the case of an out-patient who presents himself at a clinic and about whom abso lutely nothing is known, the danger is great. Yet such a person has the same rights to suit that an in-patient has and he sometimes exercises them, under the guidance of a pettifogging lawyer. As the law stands, every individual practitioner who

attends in or out-patients is personally liable for their treatment and in case of a charge of malpractice being set up is liable for damages, and for costs in case the plaintiff is worthless. It will be thus seen how great a risk men run, in pocket, in reputation, and in peace of mind who attend who attend hospital patients. The law should be amended so as to make the hospital trustees responsible financially for the staff, both out-door and in-door, as was proposed by the Bill introduced by Dr. Ryerson last session of the Legislature, or the acceptance of gratuitous aid should bar the right to suit. We commend this important matter to the earnest consideration of the Council, with a hope that they will do something through the Legislature to remedy this crying evil.

THE ONTARIO MEDICAL ASSOCIATION.

The next meeting of this, the most vigorous medical association in Canada, promises well. There is a superabundance of papers, and one great question with which the committee of arrangements will have to deal, will be the keeping of the papers and discussions within certain well defined time limits. We have the provisional list of subjects before us. They are well selected, and our readers will notice that, while most of the work is being done by home men, a few notables from the outside are to be with us.

DISCUSSIONS AND PAPERS.

The President's Address.—R. W. Bruce Smith, Hamilton.

Papers by Guests.—Intestinal Complications in Gynecic Surgery—J. B. Murphy, Chicago. Embryonic Remains in Cases of Eczema of the Navel—Robert T. Morris, New York. Operative Treatment for Bronchocele—Francis J. Shepherd, Montreal. Laryngeal and Tracheal Tuberculosis, the Importance of their Early Recognition and Treatment—F. W. Chappell, New York.

Discussion in Medicine.—Diphtheria—W. J. Wilson, Richmond Hill; followed by G. M. Aylsworth, Collingwood, and J. T. Fotheringham, Toronto.

Discussion in Surgery.—Delayed Union in Fractures—George A. Peters, Toronto; followed by I. H. Cameron, Toronto, and A. McKinnon, Guelph.

Discussion in Therapeutics. — The Physiological and Therapeutic Action of Iron, with a discussion of its newer Pharmaceutical Compounds—H. A. McCallum, London; followed by J. H. Sangster, Port Perry, and A. T. Rice, Woodstock.

Discussion in Obstetrics.—The Primary Repair of Genital Lesions of Child-birth—K. N. Fenwick, Kingston; followed by H. Meek, London, and H. T. Machell, Toronto.

The Present Position of Antitoxin in the Treatment of Diphtheria—Charles Sheard, Toronto. Antitoxin in the Treatment of Diphtheria, with Clinical Notes of Cases—J. D. Edgar, Hamilton. Calomel Fumigation in the Treatment of Diphtheria — T. F. McMahon, Toronto. Phlegmasia Dolens, Report of Cases—J. Campbell, Seaforth. Constipation—H. Arnott, London. Treatment of Pulmonary Tuberculosis—D. Marr, Ridgetown. A few Remarks on Home and Foreign Climate in Consumption —E. Playter, Ottawa. Science in Medicine—F. Oakley, Toronto. Hydrotherapy in the Treatment of Exanthematous Fevers—A. K. Sturgeon, Petrolia. Inflammations of the Optic Nerve, their Causes and Prognosis—G. S. Ryerson, Toronto. Cataract—R. A. Reeve, Toronto. A Case of Pneumo-Peritoneum—C. J. Hastings, Toronto. Puerperal Insanity—N. H. Beemer, Mimico. Narcotic Addiction—D. Lett, Guelph. Notes on Paresis—Ezra H. Stafford, Toronto. Use of the Stomach Tube—G. Hodge, London. A Case of Scurvy in a Child—H. T. Machell, Toronto. A Case of Progressive Unilateral Facial Atrophy—T. F. McMahon, Toronto. A Case of Morphœa—A. McPhedran, Toronto. Notes on an Epidemic of Herpetic Tonsilitis — J. R. Hamilton, Port Dover. The Antiseptic and Eliminative Treatment in Typhoid Fever—W. B. Thistle, Toronto. Traumatic Hysteria—D. C. Meyers, Toronto. Currents and Counter Currents in Therapeutics, or a Plea for Rationalism in the Treatment of Disease—J. H. Sangster, Port Perry. Intelligent Use of Rectal Injections, with Improvement of ordinary Enema Syringe—P. P. Burrows, Lindsay. Some Remarks on Pneumonia, with Report of an Interesting Case—R. V. Bray, Chatham. Metallic Sutures in Fracture of the Patella—J. J. Cassidy, Toronto. Cases of Post-Pharyngeal Abscess, Double Cephalhæmatoma, Leucoma, Colitis, etc.—G. Acheson, Galt. Traumatic Septicæmia—J. C. Mitchell, Enniskillen. An Operative Procedure for Spina Bifida—H. Howitt, Guelph. Intestinal Anastomosis, with Murphy's Button—J. L. Davison and L. Teskey, Toronto. A Case of Anterior Abdominal Nephrectomy for Calculus, with Patient—L. MacFarlane, Toronto. An Operation for Hare-Lip—A. Groves, Fergus. (a) A Case of Ectopic Gestation, 4½ Months, Operation and Recovery. (b) A Case of Mental Aberration following Removal of an Ovarian Cyst—W. J. Gibson, Belleville. Tumors of the Bladder, Report of Cases—F. LeM. Grasett, Toronto. Seminal Vesiculitis—E. E. King, Toronto. Foreign Bodies in the Knee-Joint—G. Bingham, Toronto. Modern Experimental Surgery on Man and Woman, a Criticism of Operations done and the Results obtained—J. F. W. Ross, Toronto. The Use of Ichthyol in Gynæcology—L. Sweetnam, Toronto. Use of the Projection Microscope in the Teaching of Anatomy —A. Primrose, Toronto. Display of Bacteria—J. Caven and F. N. Starr, Toronto. Notes on Carcinoma—H. B. Anderson, Toronto. Remarks on Appendicitis, with Report of Case of Recovery after Rupture of Abscess into the General Peritoneal Cavity; Exhibition of Specimen —T. K. Holmes, Chatham. Some Remarks on the Operation for Cleft Palate—G. McDonagh, Toronto.

CANADIAN MEDICAL ASSOCIATION.

The next meeting of this Association will be held in Convocation Hall, Queen's University, Kingston, on August 28th, 29th and 30th next. This, owing to a number of circumstances, promises to be one of the largest Conventions ever held in Canada.

Dr. James Stewart, of Montreal, will deliver the address in Medicine; and Mr. I. H. Cameron, of Toronto, the address in Surgery. It is intended to have a skin clinic, at which several interesting cases will be presented, and these will be discussed by prominent dermatologists. There will probably be other clinics as well.

Another pleasure partly expected is that of having the first President of the Association, Sir Charles Tupper, at the meeting.

LETTER FROM BERLIN.

Among the interesting cases examined at Prof. Mendel's Poliklinik here, was one of Graves' disease, or, as the Germans call it, Basedowsche Brankheit, although the latter physician's account of it appears five years after Dr. Graves, the Englishman, had described it. As this was such a typical case, "a class case," as they called it, I have taken occasion to give your readers a short description of it. The patient was a rather stout servant girl, 28 years old, unmarried. Father died when patient was young, cause unknown. Mother died of phthisis; no brothers or sisters; no history of nervous or other hereditary disease in family. She was positive that none of her relations had been affected with a similar disease.

She always enjoyed good health until about two years ago. Had given birth to one child who died in infancy; no abortions. The present trouble began in '93, and first appeared as palpitation of the heart, followed by general weakness, shortness of breath, flushing of face, profuse and frequent perspiration. Her eyes began to be more prominent and weak and became somewhat swollen. She also noticed that when she attempted to do anything her hands and arms would tremble and jerk, but no spasms occurred. When irritated would easily give way to bursts of temper or fits of crying. Menses became scanty and irregular, every two weeks being the rule. Surface of body often felt hot and uncomfortable, with frequent appearance of a red rash. Appetite poor, vomiting occasionally and bowels irregular.

Statuo presens.—

Very marked exophthalmus, bilateral and equal lids widely separated, exposing a great deal of the sclerotic, but can be closed completely. Almost entire absence of the act of winking. This apparent retraction of the upper lids with absence of winking is described as Stellway's symptom. The eyes moved freely in all directions, but in the downward movements the upper lids were observed not to follow as in health, but to remain in a retracted state.—Graefe's symptom. The power of convergence defective, for when patient fixed on an object held close to her nose the left eye gradually turned outwards, due to weakness of internal rectus—Möbin's symptom. The pupils were equal, regular, moderately dilated and reacted normally to light and accommodation.

The thyroid gland was moderately enlarged, right lobe more so than left, and on palpation soft, elastic, with distinct pulsation and thrill.

Circulatory system.—Heart apex beat in normal situation, powerful; sounds clear; second pulmonary tone accentuated; carotid and abdominal aorta throbbing; pulse full, regular, compressible, and 140 per min. when patient was standing.

The skin showed pronounced dermography, thus, when the patient's initials were traced on her chest with the end of a percussion hammer, in a few moments they appeared as distinct red characters. Hands hot and moist. No pigmentation or rash was seen on body.

Reflexes superficial and deep, present; no œdema of eyelids or feet; marked tremor of arms and hands.—Maria's symptom.

The treatment ordered was rest and quietness, a tonic and galvanism to cervical sympathetic. Electricity has quite beneficial in these cases at this clinic. The galvano-faradic current is not used, but simply galvanic.

In another case of this kind undergoing treatment, the tachy cardia, palpitation of heart with throbbing arteries, tremor, flushing of surface, and excessive perspiration, were the most marked symptoms, there being very insignificant prominence of eyeballs, and no thyroid tumor. In fact the nature of the disease could easily have been overlooked on superficial examination.

INGERSOL OLMSTED.

Berlin, 9th May, 1895.

ALLEGED CURE FOR LUPUS AND CONSUMPTION.—Consul-General Key, of Berlin, has sent to the State Department the following communication, which we print in part: "The coming Medical Congress in Munich is likely to give no little attention to a discovery made by Dr. Louis Waldstein, of New York, which is announced this week in the *Berliner klinische Wochenschrift. Med. Rec.*, the most serious and trustworthy medical weekly in Germany. Congress will have much to say about the Loeffler and Behring heilserum for the cure of diphtheria, and as Dr. Waldstein's discovery in a certain sense completes the heilserum, acting favorably on patients whom the serum does not cure, the new idea of the American can hardly fail. . . . I have thought that such a discovery, even if it cured the obscure and hitherto incurable disease of the skin called lupus, ought to be known at once in America, where it may save lives and shorten much affliction. During his earlier studies in New York, Dr. Waldstein had his attention called to pilocarpine. This alkaloid acts powerfully on the salivary and the sweat glands. At the time Dr. Waldstein was trying to discover the effects of the stimulation of various glands, like the thyroid, lymphatic, etc., he made the discovery that pilocarpine exercised the most surprising effects on the lymphatic glands and the entire system, to which we ascribe the elaboration of the lymph, or white corpuscles of the blood. Coming to Berlin, he passed the last four months at the Urban Hospital. It was here that he proved to himself the truth of his reasoning on the relations of the lymphatic system to diseases like lupus, as well as tuberculosis in other forms, to diphtheria, and other diseases. He has satisfied himself that pilocarpine, when injected in to the veins, forms a trustworthy test for the presence of tubercular disease in man and in animals, giving the physician the strongest possible certainty in the diagnosis of obscure cases. A striking instance of the truth of his reasoning is the case of a man, twenty-four years old, a Berliner, who has had a lupus on the back of his right hand for twenty-two years and was thought incurable. Relief was immediate after the first injection, and the hand is almost healed. This cure has created a sensation among medical men, and some hope that the road to the cure of cancer also has been entered."

HOSPITAL ABUSE IN FRANCE.—This is, evidently, becoming a very serious professional matter across the Channel, as it has become in this country, and we understand that a considerable section of the profession, in France, is supporting a movement in order to prevent still further abuse, *Hosp. Gaz.* At important meetings, recently held, it has been decided that charitable institutions, having been created for the necessitous and poverty-stricken, should be closed against those who are spuriously indigent, and that it is necessary that an effectual control should be established over these institutions, the present system being illusory, seeing that it permits people in easy circumstances to obtain gratuitous hospital attention. It is, therefore, proposed that a law should be passed laying down the fixed rule that hospitals are for the indigent alone, and that any person, therefore, who is able to defray the cost of his medical treatment, and who yet applies for relief at charitable institutions, shall be deemed guilty of misdemeanor, and, unless the case be one of urgency, shall, on conviction, be adjudged to repay his expenses to the hospital, and a fine not exceeding fifteen francs in addition. In cases of frequent infractions of the law, the offender may also be condemned to several days' imprisonment. We are not sufficiently advanced in this country for such legislation against English hospitals to have any prospect of success, but it is, at any rate, interesting to observe that our French contemporaries are suffering in precisely the same manner as ourselves from the unfair competition of charitable institutions; while it should be, at any rate, stimulating to medical practitioners, in these islands, that their brethren across the channel are sufficiently united in defence of their own interests, and sufficiently determined to protect them, to propose to apply to Parliament for such measures of reform. We are beginning to move in this country in the same direction of self-defence, and it is to be hoped that in time the crying scandals of the powerlessness and disunion of our profession will be removed.

THE SAMARITAN HOSPITAL FOR WOMEN, MONTREAL.—A new hospital for women, with the above name, was opened by Her Excellency the Countess of Aberdeen, wife of the Governor General of Canada, on the 17th of January, 1895. It is non-

sectarian, and supported entirely by voluntary contributions, of which latter enough were handed in during the first month to carry on the work during a whole year. It is the only special hospital for diseases of women in Montreal, and will be moulded on the pattern of the celebrated New York State Women's Hospital in New York City. It is managed by a board of thirty of the principal ladies of the city, assisted by an advisory board of three laymen and three physicians. The staff consists of Sir James Grant, M.D., K.C.M.G., consulting physician; Wm. H. Hingston, M.D., LL.D., consulting surgeon; A. Lapthorn Smith, B.A., M.D., M.R.C.S. England, surgeon-in-chief; H. Lionel Reddy, C.M., M.D., surgeon; S. F. Wilson, C.M., M.D., assistant surgeon and registrar; Dr. Sylvester, assistant surgeon, and Dr. Letellier de St. Just, assistant surgeon. An anæsthetist and a pathologist will be appointed shortly. The outdoor service is attended to by the assistant surgeons from 4 to 5 p.m. every day, at which hour the surgeon-in-chief makes his daily visit, and the most urgent cases are admitted. The hospital is absolutely free to women who are poor and sick, and who are residents of the city. Patients from outside the city will be admitted on payment of a nominal charge. The operation days are Thursdays and Fridays at 10.30 a.m., when physicians who have not been attending infectious diseases will receive a hearty welcome. The hospital is situated in the choicest and healthiest part of the city, 1000 Dorchester street, near Mackay street, and may be reached by the St. Catherine and St. Antoine street cars, which each pass within one block of the door.

THE ANTIQUITY OF MAN.—In the current number of the *Nineteenth Century*, *Lancet*, Prof. Prestwich adduces some new facts in support of the great antiquity of man on this planet. The history of opinion on this subject is curious. So recently as 1847 the Geological Society declined to publish a paper which aimed at showing that man co-existed with the extinct quaternary mammalia. Then came the researches of M. Boucher de Perthes, near Abbeville, which proved the existence of human weapons in the quaternary beds containing the fossils of the mammoth, woolly rhinoceros, hyæna, reindeer, etc. Then Professor Prestwich, Sir John Evans, and others showed that undoubted worked flints were present in shingle containing mammalian remains, and so men of science became satisfied that palæolithic man existed in post-glacial times. Here the question rested for a time, but in the course of time inquiry was naturally directed to the problem whether the relics met with in the valley drifts were the work of the earliest race of men. "The workmanship on some specimens of the palæolithic implements was not very much inferior to that of neolithic times, and what was known of the human frame indicated but slight, if any, inferiority in its physical structure to that of modern man. All led one to suppose that ruder ancestors preceded palæolithic man." The most important recent discoveries have been on the North Downs in Kent. Here implements of various kinds—scrapers, drills, hand-picks, roughly chipped flints, etc.—have been found, and Professor Prestwich is disposed to assign a very high antiquity to them. These implements appear to have been used for hammering, for breaking bones, for scraping skins, bones, and sticks, and for chipping and trimming other stones for use. He believes that their age must be assigned to some time previously to, or contemporaneously with, some part of the glacial period. According to Professor Prestwich the appearance of palæolithic man—that is to say, the man of the valley drifts—does not extend probably beyond a distance of about 20,000 to 30,000 years, and his disappearance at about from 10,000 to 12,000 years, from our own time. Other authorities, such as Croll, have assigned a much more remote period; but while absolute agreement on a matter so difficult is not to be expected, it is evident that geologists are more and more becoming of opinion that a very high antiquity of man is practically certain.

THE INFLUENCE OF PREGNANCY UPON DENTAL CARIES.—As a result of a study of the teeth during pregnancy, Peterson, *Dental Cosmos; Med. News*, arrives at the conclusion that dental caries is peculiarly liable to occur at this time. He defines such caries as a condition characterized by molecular disintegration of the normal constituents of the teeth as a result of the action of certain pathogenic micro-organisms which produce lactic acid, which, in turn, decalcifies the enamel and exposes the dentine to the attack of the

bacteria. It is believed to be impossible that lime-salts are abstracted from the teeth to supply the needs of the growing fœtus. More than enough phosphates are ingested to supply the needs of both mother and child; hence the maternal teeth do not suffer from lack of nutrition. During gestation osteophytes are found, showing an excess of lime-salts in the system. The true explanation must be looked for in some change in the oral secretions, which thereby furnish a more favorable soil for the development of the micro-organisms. There is evidence to prove that the acidity of the saliva is increased during pregnancy, probably through changes in the blood, whereby its alkalinity is diminished. The analogy between this and the lithemic condition is striking. Vomiting of pregnancy, while it may to some extent aid, cannot be considered a potent factor in the production of caries. Neglect of the teeth cannot be proved to be more prevalent during pregnancy than at other times, and, therefore, should not be considered among the causes of caries.

THE EFFECT OF THE LOCAL APPLICATION OF GUAIACOL IN THE REDUCTION OF THE TEMPERATURE IN TYPHOID FEVER.—McCormick has written a paper, *Med. News*, on this subject, and in summing up the article, says he is convinced of the following facts:

1. That guaiacol when locally applied is certain to reduce temperature.
2. That with the care that a physician should always use in the administration of drugs, it is absolutely safe.
3. That chills will not occur if the temperature is not reduced below 100° F.
4. That no deleterious effect is produced upon any of the organs by its use.
5. That it is easy to apply, and can be used by any one competent to nurse a typhoid fever case.
6. There are no depressing effects following an intelligent use of the drug.
7. That by continued use the dose can be gradually lessened.
8. That it is far superior to the cold bath; that it can be used by one person; that no appliances are necessary for its use that are not obtainable in every home; that it is much more pleasant to the patient; that it is fully as effective; that patients are not subjected to the danger of moving, and they offer no resistance to its use.

McCormick has thoroughly tried the bath and cold packs, and knows that they have proved very efficacious in many cases, but with his experience with guaiacol has no desire to return to either of them.

LIGATURE OF THE SPERMATIC CORD IN THE TREATMENT OF HYPERTROPHY OF THE PROSTATE GLAND.—In a paper read before the Philadelphia Academy of Surgery in November, 1894, Ewing Mears held, *Br. Med. Jour.*, that to obliterate the function of the generative apparatus would be a rational method of treatment in ordinary forms of prostatic hypertrophy, Without doubt, he stated, castration would prove effectual in the production of atrophy; but to this operation patients would naturally refuse to submit unless in advanced stages of bladder disease resulting from prostatic obstruction. Ligature of the vas deferens was suggested as an operation which would probably be as efficacious as castration and be more readily acceptable. The author has seen the report of one case in which this operation had been performed with a successful result. The gradual disappearance of the sexual function, the author pointed out, would not be so liable to disturb the mental condition of the patient if the testes were preserved. In every case the patient should be informed of the character of the operation and what is intended to be accomplished by it. The author regards it as the duty of the surgeon to urge very earnestly the performance of any operation which will be efficacious in terminating the horrible sufferings of those suffering from the results of prostatic obstruction.

WHEN TO OPEN THE MASTOID.—In an interesting article in the *Internat. Jour. of Med.*, Dr. Bishop concludes that the mastoid should be opened:

1. When there is an acute inflammation of the bone that resists palliative treatment.
2. When repeated swellings and abscesses occur.
3. When there is bulging of the posterior and superior wall of the meatus with suppuration of the middle ear.
4. When there is a fistula.

5. When there are severe pains in the same side of the head as the diseased ear, which resist all other treatment.

6. When a fever otorrhœa cannot be cured by any other means.

Gentlemen, I have dwelt upon the details of these operations for the reason that I have always been impressed with the fact that the most brilliant success followed the closest attention to the little things. If the minute details of an operation are faithfully observed, the conspicuous points will not escape us; but if the gaze is fixed upon the loftiest barren peaks of a mountain range, the far more fertile foot-hills may be overlooked.

THE DIETETIC TREATMENT OF PHTHISIS.—The following suggestions by Dr. Henry P. Loomis, *The Practitioner*, are worthy of careful consideration:

1. Never take cough mixtures if they can possibly be avoided.

2. Food should be taken at least six times in the twenty-four hours; light repasts between the meals and on retiring.

3. Never eat when suffering from bodily or mental fatigue or nervous excitement.

4. Take a nap, or at least lie down for twenty minutes, before the midday and evening meal.

5. Take only a small amount of fluid with the meals.

6. The starches and sugars should be avoided; also indigestible articles of diet.

7. As far as possible, each meal should consist of articles requiring about the same time to digest.

8. Only eat so much as can be easily digested in the time allowed.

9. As long as possible, systematic exercise should be taken to favor assimilation and excretion; when this is impossible, massage or passive exercise should be undergone.

10. The food must be nicely prepared and daintily served—made inviting in every way.

TREATMENT OF ALCOHOLISM BY STRYCHNIA NITRATE.—In *Gaillard's Med. Jour.*, Breed is quoted as stating, in the *Med. News*, that we have in this drug a remedy that overcomes the desires, with the least effort on the part of the inebriate; a remedy that overcomes the gnawing at the epigastrium, that tones up the nervous system and overcomes mental disturbances, that brings back the appetite, and more than all else, exerting a moral influence upon the patient, supplying that which before was lost, viz.: hope, enthusiasm, and self-confidence, a bright, youthful expression of the eye, in the stead of the sneaking, apologetic air which is the external badge of moral depravity.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.—This Association holds a meeting in Toronto, commencing September 3rd, 1895. It has a standing committee on electrodes, which is endeavoring to secure before that date the universal adoption of uniform connections, a standard gauge of screw throughout construction, and efficient, durable, simple and interchangeable electrodes. Circulars have been sent to every manufacturer of electro-therapeutic apparatus, whose name is known.

We wish the Association every success in this much-needed improvement in the appliances of a science so rapidly coming to the front in popularity and usefulness, as electro-therapeutics.

BLACK EYE.—There is nothing to compare with the tincture or strong infusion of capsicum annum mixed with an equal bulk of mucilage or gum arabic and with the addition of a few drops of glycerin. This should be painted all over the bruised surface with a camel's hair pencil and allowed to dry on, a second or third coating being applied as soon as the first is dry. If done as soon as the injury is inflicted, this treatment will invariably prevent blackening of the bruised tissue. The same remedy has no equal in rheumatic, sore or stiff neck.

TYMPANITES.—*Med. News:*

℞—Naphthol,
Magnesii carbon.
Carb. lig., ... āā . gr. lxxv.
Ol. menth. pip., ... gtt. x.—M.
Et div. in chart xv.
Sig.—One powder when required.

EPIDEMIC OF ACUTE POLIOMYELITIS.—The cases included in the report had been under the care of a number of physicians, and different diagnoses had been made in the different cases, *Med. News.* It is evident, however, by a study of the group,

that they were all related. The patients presented the usual symptoms of acute anterior poliomyelitis, and in addition horses, dogs, and fowls in the vicinity of the epidemic died from the disease, as was shown by *post-mortem* examination.

MENORRHAGIA.—*(Rokitansky):*

℞—Extracti ergotæ, ... ℥ iss.
Acidi salicylic, ... gr. viij.
Aquæ cinnamomi, . . . ℥ vj.
Syr. cort. aurant. amar.,
Spts. juniper, ... āā ℥ iss.—M.
Sig.—One teaspoonful three times a day.

FOR CHRONIC ECZEMA OF THE FACE.—This is a modification of Hebra's ointment, *N. Y. Med. Abs.*

Compound stearate of zinc, and ichthyol, 20 parts.
Acid salicylic, ... 5 "
Glycerin, ... 10 "
Albolene (white) . . . . . 50 "
To be smeared over the affected part.

DR. BERTRAM SPENCER, of Bloor St., Toronto, has been appointed Associate Coroner for the County of York.

Books and Pamphlets.

MANUAL OF CHEMISTRY. By W. Simon, Ph.D., M.D., Professor of Chemistry in the College of Physicians and Surgeons, Baltimore, etc., etc. Fifth edition, revised, with forty-four illustrations and eight colored plates. Philadelphia: Lea Brothers & Co. Toronto: Carveth & Co. 1885.

The fifth edition of this popular work is a considerable improvement on preceding editions. The book is one for the student, and the author has certainly spared no pains or labor in the bringing it up to date; the advance of chemical science as well as the new Pharmacopœia making many changes and alterations necessary. The division of the book into seven parts is as before. A number of experiments have been added as an aid to laboratory work, which may be readily performed by students at a comparatively small cost. The decimal system has been adhered to in all weights and measures, and Centigrade with Fahrenheit in temperature. The work is an excellent one for students and teachers of junior classes in chemistry.

THERAPEUTICS, ITS PRINCIPLES AND PRACTICE. By H. C. Wood, M.D., LL.D., Professor of Materia Medica and Therapeutics in the University of Pennsylvania. Philadelphia: J. B. Lippincott Company. Toronto: Carveth & Co.

Dr. Wood's work is so well known to ninety-nine-hundredths of the medical men and students of the United States and Canada that we need only mention that the edition has been thoroughly adapted to the new Pharmacopœia, and that such new remedies as seemed necessary to the author have been thoroughly discussed. The non-officinal remedies in use have been duly considered; effete material has been carefully eliminated, and the numerous discoveries of recent years have been incorporated. Dr. Wood's book was a lamp to our feet years ago, in the then weary maze of Materia Medica, and we are sure the present volume will come as a boon to many a student now struggling with the same difficulties we then encountered.

A MANUAL OF MODERN SURGERY, GENERAL AND OPERATION. By John Chalmers Da Costa, M.D., Demonstrator of Surgery, Jefferson Medical College, Philadelphia; Chief Assistant Surgeon, Jefferson Medical College Hospital, etc. Philadelphia: W. B. Saunders. Toronto: Carveth & Co.

On looking over the many huge volumes of surgery in our libraries, and on reading any particular branch of the subject, we find that we must peruse many pages before we arrive at our desired point of information, the labor being oftentimes tedious, particularly if one be busy and have not much time at his disposal. In lieu of this, the above named volume meets a long-felt want, for it is a time and labor saving one, being scarcely eight hundred pages in all, and not weighty, so that one can easily carry it with him when desired. It contains all the essentials of surgery, devotes a part to Bacteriology, and a large space to Fractures, Dislocations and Amputations. Orthopedic Surgery is given a fair discussion, a special lecture is given on Diseases and Injuries of the Rectum and Anus, Anæsthesia and Anæsthetics, and Bandaging. In all the book is well worth its cost and no one would regret having given it a careful study.

THE CANADA LANCET,

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

The LANCET has the Largest Circulation of any Medical Journal in Canada.

Original Communications.

PAPILLOMA OF THE TONSILS*

BY H. T. MACHELL, M.D., TORONTO.

Maggie S., aged ten years, entered the Hospital for Sick Children here on the 4th of May, 1892, complaining of her throat. Her mother who brought her from Collingwood, gave the following history:

At eight years of age she (*i.e.*, her mother) noticed the enlarged tonsils accidentally one day when the child was crying from toothache. They were then quite large. Since then they have gradually increased in size. There have been no acute attacks of any throat trouble during either of these years. And yet the mother remembers that when the child was two or three years of age she had several attacks of so-called "acute sore throat." This tendency to sore throat disappeared after she was about four years old.

When she was about seven years of age her mother was told by her physician that she had goître.

Within the last year her facial expression has changed somewhat; she appears duller and more listless and is slightly deaf. Her voice is changed, and she speaks as though she had a hot potato in her mouth. There is also considerable difficulty in swallowing. Her general health is fairly good.

Her mother reminded me of the fact that she had been under my care in the old hospital six years ago. At that time she came in for a lipomatous tumor of the side of the neck just above the clavicle and shoulder, and which I removed after cautious and deep dissection. The wound was a large one, requiring some sixty or seventy sutures. From this she made a good recovery, and now only an indistinct scar marks the site of a former large wound.

Present condition.—Well-marked enlargement of either lobe of the thyroid gland, excessive enlargement of both tonsils, which are studded with closely packed papillary bodies, and, as a consequence, difficulty in swallowing, deafness, alteration in the voice, and also in the expression.

The tonsils literally filled the throat. One could scarcely believe that any food could be forced past them, so large were they, and so completely did they obstruct the fauces. They were rough and ragged in appearance at first glance. On closer inspection, however, the rough appearance was seen to be made up of numberless papillæ or pedunculated masses, packed closely together and extending downwards as far as one could see or feel with the finger. They also bulged so far forward as to hide the uvula completely and rest on the base of the tongue. There was very little sensation in them, and, bulging as far forward as they did, there was no difficulty in palpating them. Each papilloma seemed to have a separate and distinct entity. Some had a very small pedicle, others larger, but none sessile. So large and so closely packed were these papillæ that one could not help wondering at her being able to swallow at all. While she could swallow fluids if taken very slowly, there was also difficulty in the deglutition of solids. The solid particles appeared to get tangled up in the papillæ and would only pass on down after repeated efforts at swallowing. With such masses in her throat it is not to be wondered at that there was some difficulty in hearing and speaking. The change in her facial expression was, I suppose, due to her deafness and constantly keeping her mouth open.

The tonsils were so utterly unlike anything I ever saw before that I delayed doing anything whatever for her in order to allow all the members of the staff and several other medical friends to see her at their leisure. The *size*, as well as the *appearance*, was something *unique*. In fact, the case was a "*rara avis*" to each and every one of us who saw her.

That a better idea of the size and appearance of the tonsils might be formed, I asked the photographer to the hospital (a professional) to photograph them. He made a number of attempts to do so, both at the hospital and his studio, but

*Published also in *N. Y. Med. Jour.*

without any success whatever. Knowing that our former president, Dr. Powell, was very much interested in amateur photography, and knowing also that amateurs in photography, as in everything else, like to get hold of something which is considered "difficult" by ordinary mortals, I asked him if he would try to secure a view of her tonsils. After a great deal of trouble and several "sittings" he managed, with the aid of the magnesium flash light, to get a photograph of the upper and anterior surfaces of the tonsils. This I now show you. Your imagination will enable you to form an idea of what the whole size and appearance must have been.

Shortly after Dr. Powell's getting the photograph of the tonsils and before any treatment was adopted, the patient was taken ill and died within forty-eight hours. Both scarlatina and diphtheria had been introduced into the hospital a few weeks before this by children or friends coming to visit little patients, and several cases of each disease had been sent up to the isolation wards a few days before this.

Almost the earliest symptom she complained of was "sore throat." As soon as seen by the house physician her throat was examined, and all the papillary growths and the few intervening spaces were seen to be acutely inflamed and covered with a grayish-white membrane very suggestive of diphtheria. The membrane, though, looked thinner than the typical diphtheritic membrane, even in its initial stage, and yet it could not be peeled off without using undue force. The uvula could not be seen, neither could the pillars of the fauces nor the soft palate, all being hidden by the tonsillar outgrowths. The discomfort and pain in swallowing were increased. The disease was not ushered in by a chill, a convulsion, or by vomiting. There was no rash. The submaxillary and cervical glands were somewhat enlarged and tender to the touch. Her temperature ran up to 102.5° and the pulse was increased to 120 to 130. The countenance was indicative of serious illness. The patient looked more seriously ill than is usual with follicular inflammation of the tonsils; besides, one glance at the tonsils and the uniform and complete character of the membrane showed us that we had to do with something more than follicular tonsillitis.

FIG. 1.

At this early stage the diagnosis lay between diphtheria and scarlatina, with a leaning toward the former. Both diseases had found their way into the ward occupied by the patient. As the mother lived out of the city we could not consult her as to whether the patient had ever had scarlatina. It was necessarily a case of waiting for more data on which to form a diagnosis.

Within twenty-four hours a typical scarlatina rash appeared. Time thus helped us out of the difficulty in regard to the diagnosis, as it does almost every day in the year.

But with such masses in her throat and such an acute attack the poor girl's chances were almost *nil* from the invasion of the disease.

Toward the end of the second day of the attack several of the staff saw the case with me, and while we were out in the corridor discussing it and our helplessness in such cases, the nurse came out to say the patient had just died.

It was thought then, as we had been cheated out of an operation and thereby prevented from getting the tonsils we had better secure one now. Accordingly, with my forefinger I enucleated her left tonsil without any difficulty whatever. And again, through the kindness of Dr. Powell, I am able to give you an idea of its appearance on paper, slightly enlarged.

I also show you the tonsil itself, very much shrunken, of course, from its immersion in alcohol for more than two years.

Dr. John Caven has examined a portion of the tonsil microscopically, and reports as follows:

"Microscopic examination of the tissue shows it to be lymphadenoid in nature. Unfortunately, improper hardening and preservation has so deteriorated the structute as to render sections very unsatisfactory. However, it is really a true hypertrophy of tonsil, tonsillar tissue being reproduced. Whether congenital or not I cannot determine. I have not been able to find a reference to an exactly similar condition in any work; the nearest to it is a papillomatous condition of the mucosa of the pharynx resulting from chronic pharyngitis. I would compare it with post-nasal adenoids.

"J. C."

My first impression on seeing the tonsil when she entered the hospital was that it would be a good case for the use of the amygdalotome, but I think now, from the ease with which I enucleated the one, that in similar conditions, or in cases of very large tonsils, enucleation would be preferable and probably quicker. There was no difficulty in shelling it out with the forefinger and finger-nail, and I was a very little longer time in doing it than is ordinarily taken in performing amygdalotomy. In enucleation, one could be certain that the stump would give no future trouble—a result which can not always be promised after amygdalotomy.

The Jarvis snare might have been used, and from the large size of the tonsils and the consequent difficulty in getting the tonsils in the ring of the amygdalotome, I think the snare would probably have answered the purpose better than the ordinary amygdalotome. Even with the largest-sized amygdalotome, and taking ample time over it, I am positive the whole of the tonsil and its outgrowths could not have been drawn through the ring. Therefore it would have been necessary to introduce the amygdalotome two or probably three times before getting away the whole of it. In this way longer time would have been consumed than with enucleation.

That these papillomatous tumors of the tonsils are *very rare* I am convinced from a careful search of all the modern works on pathology at present in our library here. They are not even spoken of in any one of them, nor is there any mention made of them in any of the works devoted especially to diseases of the throat. What is yet more surprising, no reference is made to such a condition in the *Index-Catalogue of the Library of the Surgeon General's Office of the United States Army*, a work which contains a reference to almost everything published for half a century past.

Some of the interesting points in connection with this patient:

1. The presence of a *lipoma of the neck* at four years of age.
2. *Goître* at seven years.
3. Papilloma of the tonsils first noticed when she was eight years old—that is, at least two years before entering the hospital. Thus showing their *slow growth.*
4. The difficulty experienced in *photographing* the tonsils.

FIG. 2.

5. The *impossibility* of making a diagnosis between *scarlatina and diphtheria* in the very early stage of her acute illness.

6. The ease with which *enucleation* was done just after death.

7. The *extreme rarity* of papilloma of the tonsils.

PHLEGMASIA DOLENS.

REPORTS OF TWO CASES, BOTH ENDING FATALLY, ONE FROM SUPPURATIVE PHLEBITIS, THE OTHER FROM EMBOLISM.

BY J. CAMPBELL, M.D., C.M. (M'GILL), AND L.R.C.P. (LOND.) SEAFORTH, ONT.

Was called upon on the 27th of October, 1884, to attend Mrs. D., æt. 39 years, in her ninth confinement. Found that she had been lying in bed for ten days with what she called her "sore leg." Upon examination found that her left leg exhibited the worst case of varicose veins, without the surface being broken, I had ever seen.

Was informed that she had had trouble at a previous confinement—when the friends were told by the physician in attendance that it would probably go hard with her if she should again become pregnant.

From the description given, would say that the difficulty on that occasion must have been of the nature of phlegmasia dolens. Upon this occasion the whole leg was swollen, and dotted over with blue tumors, larger than a pigeon's egg, which, upon examination, were found to be tense varicose veins, ready to burst. She was five or six hours in labor, but came through it fairly well, without the aid of instruments. There was no flooding. The child was born alive. Remained the usual length of time after delivery, and, as I lived nine miles from my patient, gave particular directions as regards cleanliness. Urged her to lie in bed longer than usual on account of the leg, and advised her to get it bandaged before getting out of bed. I left her, hoping that all would be well; was called upon the fourth day, the messenger saying that she had taken chills, followed by fever, and was quite ill.

Found my patient with a temperature of 105°, pulse 120, and somewhat compressible; the milk had been secreted and the lochia was free and sweet. Examined the leg and found it swollen and painful, the femoral vein being like a whipcord, and the inguinal glands tender and enlarged. The skin was tense and glazed, and the veins were at places near the bursting point. Told the friends that it was a case of phlegmasia dolens, or, what in common parlance is known as "milk-leg." Caused the leg to be raised, and ordered hot fomentations, and prescribed quinine and ammonia, with whisky and milk. Syringed out the vagina with hot carbolic lotion, 1 to 40, and ordered the clothing to be changed every day, as had been done since delivery; enjoined fresh air and sponging the surface of the body, and left. This was on the 31st of October. Next day the husband called for medicine, and informed me that she was no worse. I visited her on the following day, also on the 4th, 6th and 8th. Expected that the case would be a tedious one, I resolved to visit the patient only on alternate days.

To condense the report, we would say that the case went on from bad to worse, contrary to my expectations, until it reached a fatal termination. The milk was suppressed, the lochia became scanty and of a bad odor, and the limb swelled until it was about double the size of the other one. What was still more serious, abscesses to the number of over a dozen formed along the course of the femoral vein.

These we lanced freely, and ordered to be sponged with carbolic lotion every three or four hours. Linseed poultices covered with pulverized charcoal, were applied, and changed after each sponging. The bowels had been kept open from the first with medicine, but the motions continued unhealthy, and had a bad odor throughout her sickness.

She had a succession of chills, followed by a high temperature, sometimes reaching 106°, then came profuse sweatings, with a dry, brown tongue, and other symptoms of pyæmia. The face now wore an anxious expression; the pulse ran up to 150, then delirium supervened, and finally she sank into a comatose condition, and died in a state of exhaustion.

This was the first and only case of supurative phlebitis, or what might technically be termed peri-venous cellulitis, which I ever had in a practice extending over a quarter of a century. I had given a favorable prognosis up to the time of the formation of pus in the veins, but after that

event we felt that "chances and war were against us."

At the time I had no literature on the subject. I treated the case on common-sense principles, though I find that even at this distance of time I could not have done much better.

CASE II.—Was called on the 29th of January last to attend Mrs. A., æt. 31, in her fifth confinement. Was only half an hour in the house when she was delivered of twin boys, both alive. The second was born about fifteen minutes after the first; there was only one placenta, or the two were so intimately connected that to all appearance there was but one.

It was nearly an hour before the placenta was expelled, and then there was more than the normal amount of blood lost, so much so, that I remained with her another hour, compressing the uterus with my hands, to prevent serious flooding. Ergot had previously been repeatedly given. Was told next day, that after I left, she had lost so much that the friends were on the point of sending for me. Found her somewhat pale, but pulse and temperature were normal, the pulse was moderately compressible.

Put her upon comp. syrup of hypophosphites—told the friends to change her every day—wash the genitals, and keep the breasts empty when milk would be secreted, and said I would not call again unless sent for.

On the fifth day was called in haste by the husband, who said his wife had a severe chill, and was now much fevered. When I reached her bedside I found that the temperature was 106½°, pulse over 120, and that she was complaining of a severe headache. The breasts were swollen, hard and lumpy. Found that they had fed the children, and allowed the milk to accumulate in the ducts. The lochia was not suppressed, and, moreover, was perfectly sweet. There was no tenderness over the womb, nor any signs of inflammation or puerperal fever. As a precautionary measure I used the uterine douche, with hot carbolic lotion. Gave gr. x of phenacetine to reduce the temperature, and prescribed gr. x of quinine every four hours. Made them empty the breasts, and ordered the nurse to keep the children at them, so as to prevent future accumulation.

Was not long home when the husband called me back, saying his wife had taken another chill. Found the temperature 104°. Did not use the syringe, as I thought it possible that the last chill might have been caused by the syringing. Visited her again late in the evening, and found the temperature 102°, which change we attributed to the medicine.

The next day—the sixth after confinement—saw her morning and evening and found the temperature still above normal, though, in other respects, she was apparently doing fairly.

Expected to find the fever gone by this time—on the theory of the milk in the breasts being the sole cause of the trouble. The temperature, on the contrary, ranged from 101½° in the morning to 102½° in the evening, notwithstanding she was getting gr. x of phenacetine and gr. xx of quinine every day. The breasts were also kept empty and the bowels open.

On the evening of the eighth day after delivery the patient complained of pain in the right elbow, but nothing was to be seen and nothing came of it. On the evening of the ninth day she complained of pain in the calf of the left leg—increased upon pressure.

As the temperature had been ranging between 100° and 102½° in spite of the antipyretics she had been taking, I suspected that she might be taking phlegmasia dolens, and told the friends of my suspicions. Said that the next day would clear up the diagnosis. At this time the legs were exactly similar in appearance and of the same size.

Next day, however, the left leg and foot were swollen, the glands of the left groin enlarged and tender, and the femoral vein could be felt hard and round. This was the tenth day and the diagnosis was clear. The leg was slightly raised, hot fomentations of hops and poppy-heads were applied and she was put upon ℥xx doses of iron four times a day. The quinine and phenacetine were still given at night, and her strength was sustained by liquid nourishment given at short intervals, especially milk and whisky, beef-tea and egg-nog. The leg did not long remain clear and shining, but soon began to diminish in size, and pit upon pressure. The temperature, too, went down too 100° and shortly afterwards to the normal.

The patient did not complain of pain. The bowels were kept open by cascara sagrada. The pulse was seldom over 90, and after a time became normal. All the symptoms indicated a mild case

and a favorable termination. Her strength, too, increased, her appetite returned and, in short, she was doing so well that I only visited her every second day. Thus the case progressed from the tenth until the fifteenth day from delivery. She said she felt well enough to get up. Her friends felt somewhat annoyed to think that a woman so well had to lie in bed from three to six weeks as I had told them, hence they asked for a consultation to decide the point.

On the morning of the sixteenth day after delivery, and the sixth from the day the limb began to swell, Dr. Bethune examined the patient and pronounced her, so far as he could see, out of danger. She was particularly well. She had no pain, the tongue was clean, the temperature, pulse and everything else were natural. The swelling was well down and the limb pitting freely upon pressure. Her strength was greatly increased; she was cheerful. Time and rest, the Doctor said, was all that was required.

The consultation took place about 10 a.m. At 2 p.m. same day she complained of pain in the other leg which the friends relieved by rubbing with turpentine and oil. The pain returned near 8 o'clock, when the nurse rubbed it again, and in doing so turned her over on her left side and even had her sitting up in bed. She suddenly turned purple in the face, writhed and twisted around as if in pain, turned her head to one side—*and died.* The friends thought at the time she had taken a fit and sent for me in haste. Found her dead. The right leg had not swollen, and the swelling in the left had decreased considerably. Gave it as my opinion that the cause of death was embolism, a clot having been carried to the right heart and thence through the pulmonary artery to the lung, cutting off or obstructing the circulation in that organ. Had she lived no doubt she would have had the same disease in the right leg with a very tedious recovery. Her death was indeed more than a surprise. It might be likened to a ship going down as she hove in sight of the harbor with a glassy sea beneath her and a clear blue sky above, and not a cloud on all the horizon.

Remarks on both cases.—(1) The swelling in both cases began at the periphery. The first patient lost power over the limb, the second did not. The first experienced severe pain, the second had comparative immunity from pain.

(2) I feel certain that both veins and lymphatics were involved in both cases, the former being inflamed, the latter obstructed.

(3) In my opinion the phlebitis was produced by the precipitation of the fibrine by the action of a septic agent which had either been developed in the blood or had made its way into that fluid.

(4) As to the predisposing cause in the first case—besides the hyperidrotic state of the blood in all pregnant women—the varicose veins of the first, I believe, were the great cause of the trouble which ended so disastrously.

(5) In reference to the second case—besides the condition of the blood already mentioned and a moderate varicose condition of the veins not previously referred to—I believe that the head and point of offending, so to speak, was the loss sustained at confinement, weakening still further an over-taxed nervous system.

(6) The modes of death were different, the first dying from pyæmia, the second from thrombosis—producing asphyxia from arrest of circulation in the lungs.

(7) In conclusion, we would say that the pathology of this interesting disease is still somewhat obscure and much has yet to be found out in reference to it.

Selected Articles.

THE SEXUAL CRIMINAL.

Though a firm believer in polygenesis and the multiple inception of the human race, I, nevertheless, hold that pithecoid man, everywhere throughout the world, was, anatomically and structurally identical. All prehistoric skulls, whether unearthed in America or in the Old World, show that man was dolichocephalic or long-headed. They also show that primitive man was prognathous and that his orbital arches were greatly enlarged and developed. The structural characteristics enumerated above are also found in the primitive races yet inhabiting the earth, and most marked in those races that rank lowest in the scale of human intelligence and social economics. This latter fact is to be expected, for it is an acknowledged conclusion that the lower a race is in point of intellect, the nearer that race is to its primeval ancestry. Again, the phenomenon of atavism or reversion teaches us—a mesocephalic race—that our savage ancestors were long-headed and prognathous;

for, in the congenital criminal, emphatically an atavism, we plainly see an individual, anatomically and psychically, closely akin to the savage and barbarous peoples from whom we have been, unquestionably, evolved.

The white sexual criminal, and throughout this paper, I mean by sexual criminal, the individual who commits rape, shows, very plainly, to the eyes of those who are versed in such matters, the signs of physical and psychical degeneration. He may have been born degenerate with a bias toward criminality stamped indelibly on his psychic being, or, through excess, he may have engendered certain pathological conditions in his physical organism which make him tend toward anti-social acts. The white congenital sexual criminal commonly presents certain marked physical characteristics. I have personally examined two white men who had been guilty of rape, and both of them were dolichocephalic and prognathous. Their orbital arches were greatly enlarged and their cheek-bones high and prominent. Their genitalia were abnormally developed, and the growth of hair on their bodies rank and thick. Both of them had fair hair and both had malformed ears; in one the lobes were long and pendulous, in the other there was complete absence of the antihelix. Both were below the average in point of intelligence. Says Ottolenghi of the sexual criminal: "On the whole anomalies of the genital organs have, in sexual offenders no small diagnostic importance, especially when united to other characteristics which distinguish them from the honest and criminals in general, as the greater frequency of fair hair, of malformed ears, of bichromatism of the iris, of blue eyes, of twisted noses, of facial asymmetry, of voluminous lower jaws, and of various neuroses, espeally epilepsy." These men knew that they would probably suffer death in consequence of their crimes, yet, imprisoned and safe from mob violence, they became jovial and light-hearted, for all the world like children who had escaped, for the time being, well-merited punishment. The child-like nature of savages is well known, therefore I wish to emphasize this fact in these two criminals, for it tends to show the truth of that which I have declared before, *i.e.*, that the white sexual offender is, in the vast majority of cases, an example of psychic atavism.

Love is an unknown emotion both to the violator and to the savage; they are both instigated by lust. In discussing the sensuality of criminals, Havelock Ellis says: "Love, in its highest and strongest forms, seems to be extremely rare." When a man was asked if he really loved the woman for whose sake he had murdered her husband, he replied: "Oh, if you had seen her naked!" I asked one of the sexual criminals examined by me if he loved his victim. "No," he replied; "but her legs were very beautiful."

The criminal is perfectly well aware of the fact that rape is an anti-social act and that it will be severely punished, yet his savage lust, held in check by no moral restraint, will lead him to commit the act if opportunity offers, and he thinks that he can escape punishment. He will commit rape not only once, but many times if he can escape apprehension. I have in my possession a sketch of the skull of P. J——, a criminal, who, it is believed, raped no less than five different women. An engraving of this skull can be seen in my article on "Criminal Anthropology," in the *Medical Record*, issue of January 13, 1894. This skull points, beyond a shadow of a doubt, to an atavism or reversion to an ancestral type. The Neanderthal skull and the skull of the Man of Spy, both prehistoric skulls, are startlingly like the skull of this modern violator.

False sentiment as well as the law declares that all men are brothers. Science declares that such a conclusion is absurd and fallacious. There is too marked a difference between the dolichocephalism and prognathism of the normal savage, the negro for instance, and the mesocephalism and orthognathism of the normal white man for fraternal relationship. I have pointed out the fact that the dolichocephalism, etc., of the white sexual criminal are abnormalities and the result of degeneration. The long head and the projecting jaws of the negro, however, are normal; they are anatomical characteristics peculiar to the negroid and other savage races. Again, the psychical abnormalities of the white sexual offender are occasioned by degeneration, while the mental habitudes of the negro violator are perfectly natural. It is time that mawkish sentiments were banished, and the negro placed in the category to which he belongs. The negro has had here in America some two hundreds of years in which to acquire civilization. What folly to place his psychical development on the same plane with that of the white man who has had the advantage of him by several thousand years! Civilization, morals, are the result of evolution, of inherited experiences, therefore what arrant nonsense it is to suppose that the negro, who was a savage only yesterday, has become a moral and thoroughly civilized being to-day!*

* "One of the most generally applicable statements we can make with reference to the psychology of uncivilized man is that it shows, in a remarkable degree, what we may term a *vis inertiæ* as regards upward movement. Even so highly developed a type of mind as that of the Negro—submitted, too, as it has been in millions of individual cases to close contact with minds of the most progressive type, and enjoying as it has in many thousands of individual cases all the advantages of liberal education—has never, so far as I can ascertain, executed one single stroke of original work in any single department of intellectual activity."—Romanes: Mental Evolution in Man, p. 13.

Native-born Americans, whose ancestors came from Great Britain and Europe, are remarkably free from the evil effects of degeneration, consequently the native-born white sexual criminal is of rare occurrence. The negro violator, on the other hand, is quite numerous, springing up everywhere in all of the Southern States, where his race is mostly domiciled. His criminality is not due to degeneration, but is the result of perfectly natural and, for him, normal mental habitudes. Let us study, for a moment, the psychology of this semi-civilized savage.

The childlike simplicity and happy-go-lucky carelessness of the negro, and I mean, throughout this paper, the true negro, not the half-breed, is notorious. The cares of to-day are sufficiently burdensome for him; he lets to-morrow take care of itself. Two hundred years of civilization have given him a thin, a very thin, veneer of superficial morality. In fact his moral nature about equals that of a white child five or six years old, who has no real knowledge of abstract ethics whatever. The negro cook who steals your flour, butter, sugar, and eggs does not consider her peculations to be thefts; she numbers such acts among her inalienable rights, though she is very careful to conceal as much as possible her petty rogueries. When she drops on her knees and asks God to pardon her, your butter, sugar, flour and eggs do not form any portion of her burden of sin. The negro who robs your watermelon patch and your hen-roosts on Saturday night will be found Sunday morning in the deacons' corner of the sanctuary. His full, rich, sonorous voice will sound all the better in prayer and song, on account of the fat chicken and luscious watermelon that he has eaten before he donned his long-tailed coat and hied himself to church. His religion is pure and unadulterated superstition. God and the devil (Voodoo in some form or other) are equally objects of his superstitious regard.

The records of the police courts, wherever the laws against fornication are enforced, will show that the negro, both male and female, has little or no regard for virtue. Northern sentimentalists have declared that the slave-owning whites were to blame for this moral laxity. This is nonsense, for it is a well-known fact that three half-breeds are born to-day where there was one born during slave time, thus showing conclusively that the negro women voluntarily yield up their virtue. But why argue this question; the history of the world shows that the women of the lower races, wherever found, eagerly enter, as a general thing, into concubinage with men of the white race. The men of the lower races passionately desire the embraces of the women of the white race, and this accounts, in a measure, for the numerous rapes upon white women by negroes. The negro is rarely accused of committing rape on the females of his own race. The reason for this is found in the natural complaisance of the females of this race; the male being able to easily satisfy his desire without resorting to violence. For the same reason a white man is seldom guilty of raping a negro woman.

No amount of legislation will ever make people accept the negro as their social equal. Common-sense teaches them that he is their inferior, while science shows conclusively that he is of lower origin. Hence it happens that when a white girl has been raped by a negro the disaster is simply appalling. She feels as though she had been dishonored and defiled by some monstrous beast; her moral courage is gone forever; her honor and her virtue can never be regained. These feelings are also entertained, to a certain extent, by her relatives, friends, and, in fact, by every white individual in the whole country.

Not long since, a young lady in a neighboring State was dragged from her horse, carried into the woods, choked into insensibility, and repeatedly ravished by a negro. She was found, half dead, by a searching party late that night. Bloodhounds were put upon the track of her assailant, he was caught, brought before her, identified by her, and at once hung. This young woman came near dying from her injuries, but finally recovered. She, however, never left her home again, but, soon after she was able to leave her bed, she went into an outhouse and hung herself. Her father came home, and on finding the dead body of his daughter, seized his revolver and blew out his brains. The following night her brother drowned himself. Her relatives sold their real estate and personalty and left their native town forever.

The fear of the negro rape-fiend is general throughout the entire South. A remark of an aged negro shows me that this fear is by no means a baseless or groundless one. Said he to me, calling my attention to a young girl who was picking blackberries, "That girl is in danger. At this time of the year men's passions are hot. Some man might see her, seize her, and easily drag her into that clump of bushes." This man, for the moment, forgot his superficial civilization and allowed me a glimpse of his real, savage nature. Had he been a younger man, and if this opportunity had offered, I have not the slightest doubt but that he would have seized the girl, dragged her into the clump of bushes which his lecherous old eyes had discovered, and ravished her.

I know a young woman who is compelled by force of circumstances to take long and solitary country rides. She never leaves home without placing a revolver on the buggy-seat by her side. In the South, women never go out after sundown without an escort. The violator and his savage

lust is ever present to their minds. This is a fearful commentary on our boasted civilization, yet it is true in every particular. The sexual criminal, both black and white, is dangerous to society; so dangerous that the sooner he is destroyed the better it will be for society. The mad dog is not granted the formality of a legal trial before we blow out his brains. He is destroyed at once. The Malay who runs amuck is slain without mercy, society recognizing the fact that the end justifies the means.

It is by fear alone that the savage can be influenced. You cannot influence him by moral suasion, for he has no knowledge of morals; neither can you instil morality into him through the agency of punishments. The fear of death—sudden violent, terrible—is about the only thing that will hold the sexual criminal in check and teach him that he must restrain his savage lust. The sexual criminal, both white and black, is a savage, and should be treated as such. If the law is left to take its slow course, people become accustomed to the idea of that punishment which is eventually inflicted on the criminal, and greet its consummation with indifference. But if the criminal is taken in the act of committing rape, or soon after, and is immediately punished for his crime, the lesson comes in the nature of a shock and is not soon forgotten. Punishment is meant, not only for the criminal, but for society also, and the more forcibly society is impressed by the punishment of crime, the more deterrent will the lesson become.

The question naturally arises: Does lynching act as a preventive and a protection against the crime of rape? My own personal observations, as well as those of many conservative men, both north and south, teach me that it does. For, if a violator is apprehended and lynched in a community, the crime of rape does not occur in that community for many years, or, if it does occur, the individual committing the outrage will be found to be either a stranger who has recently come into the community, or a young man who has reached maturity since the time of the last lynching. Statistics gathered from every section of the country show that a like result does not obtain when the sexual criminal is punished through due process of law. The lesson taught by lynching creates, beyond any shadow of doubt, a profound impression, and this impresion remains tangible and vigilant throughout the lives of would-be violators, causing them to curb their lust and to pay a fitting regard to the laws of society. It has been urged as an insurmountable objection to lynching, that many innocent men are put to death by the unreasoning mob, which, carried away by its passions, hangs the first suspicious-looking individual it finds. I have carefully studied the evidence in forty-three lynchings of sexual criminals and found that the lynchers had, in every case, hung the right man. These forty-three cases have occurred during the last twenty-three years, and have been taken indiscriminately from all over the country. I have gathered my information concerning them from the most conservative and level-headed men of the communities in which the lynchings occurred, consequently, can safely assert that my conclusions are based on indisputable facts. Purists condemn the lynching of the sexual criminal, and declare that his lynching is, fundamentally, an illegal act, hence a criminal act. I hold that no act is criminal that benefits society. There is a higher law than the written law of man, the law of the preservation of species, coincidently of civilization. The crime of rape is distinctly atavistic, hence it is a menace to civilization, and should be suppressed no matter how.* —James Weir, M.D, in *Med. Rec.*

MYDRIASIS AS A DIAGNOSTIC AND THERAPEUTIC MEASURE IN GENERAL DISEASE.

There still remain here and there a few recalcitrant minds impervious to logic and evidence, who hold that ocular malfunction is never a source of extra-ocular disease. For such impenetrables, of course, no one writes, and they may therefore be warned that the present writing does not concern them. There are, however, other physicians who are in doubt about the matter, or who have never had it brought home to them, and who are willing to test it when occasion presents. There is still a third class, composed of those who believe more or less, but who are undecided exactly as to what extent the fact obtains, or just what extraocular affections are the result of ocular abnormalism. To these two latter classes we have two suggestions to make.

The first is to use mydriasis as a means of differential diagnosis in certain classes of cases of functional nervous disease that are obstinate to treatment or in which the etiology of an affection that may be due to a reflex neurosis is obscure. There is an overwhelmning mass of evidence to be found in medical literature leading to the conclusion that ametropia and muscular-imbalance may be the unsuspected cause of headache, sick-headache, functional gastric and digestive derangement,

* If purists object, stating that such a law would be unjust and discriminating, I answer, that as long as society considers the violator to be a normal man, and treats him as such, just so long will society be guilty of injustice and discrimination toward normal, healthy man. There is a higher and unwritten law, which, fundamentally, takes precedence of established law; moreover, I do not consider that which redounds to the good of society either barbarous or savage.

the ovary. Extreme development of adipose tissue may prevent its recognition, on the one hand by making the abdominal hand unavailable, or on the other by preventing the examining finger from reaching high enough up *per vaginam* to make out the form and consistency of the uterus. It will occasionally happen also that pregnancy takes place in a womb bound down by adhesions, in a pelvis in which the structures are distorted as the result of former inflammatory processes. In such cases the development of the pregnant womb is frequently atypical. All the conditions described have been encountered, and my remarks concerning them are based upon experience. In such cases the examiner usually finds enough to awaken his suspicions, but not enough to form a positive diagnosis, and thus is obliged to reserve his opinion.

Certain other corroborative evidences of pregnancy are very valuable during this period. The violent discoloration of the vagina, most marked beneath the urethra, frequently appears as early as the sixth week, and is usually well developed as early as the third month. To an experienced observer, who has been accustomed to note the difference between the slight blueness due to pelvic congestion and the intense discoloration which is present in pregnancy, owing to the changes in pelvic circulation, this sign is of great value.

Evidences of pelvic congestion, such as velvety softness of the vaginal wall, marked pulsation in the vaginal and uterine arteries, unassociated with inflammatory conditions, have a definite corroborative value.

Softening of the cervix has a certain but very slight importance, by no means commensurate with the stress which is placed upon it by writers and practitioners. The cervix often becomes soft and pulpy as the result of pelvic congestion unassociated with pregnancy; and, on the other hand, a cervix which is the seat of cicatricial or chronic hyperplastic changes will not become softened until the latter months of pregnancy. Therefore, in my judgment, very little dependence should be placed upon its condition.

About the fourth month the pregnant womb rises out of the pelvis. It is evident that when this takes place the valuable sign which we have critically discussed is no longer available. At this time, and until the fœtal heart-sounds can be heard, the sign of Hegar, namely, the extreme softening of the lower segment of the uterus as contrasted with the firm cervix, is of the greatest value. These two signs, it will be seen, are complementary to each other. The sign we have discussed in this paper is of value prior to the ascent of the womb from the pelvic cavity, the sign of Hegar from that time until the fœtal heart can be heard.

The statements contained in this paper have purposely been made emphatic, in the hope that they will attract the more attention on the part of the profession. I have not hesitated to be emphatic, because my experience has been sufficient, and has extended over such a period of time as to convince me of the absolute truth and reliability of the evidences of pregnancy under discussion.

Selected Articles.

DIFFERENTIAL DIAGNOSIS BETWEEN PSEUDO TABES, SO-CALLED, A FORM OF MULTIPLE NEURITIS, AND TABES DORSALIS.

During my term of service in the Clinic of Professor L. C. Gray, Department Mental and Nervous Diseases, New York Polyclinic, the comparative frequency with which patients suffering from multiple neuritis, presenting the symptom-complex of pseudo tabes, have been sent to us for the purpose of diagnosis, has led me to think that this very interesting pathological condition has not been established in the minds of a certain proportion of medical men as an entity, or if so established is not well understood. The hope that what follows will be of use in aiding such to made a correct diagnosis, and a deep interest which I have in the subject itself, have prompted me to present this paper to the association. My clinical experience with the two diseases named in the title uphold me in this hope, and I pray that this will be an excuse for any trace of egotism which may be apparent in what I have said.

In the beginning let me state that this paper is written entirely from a clinical standpoint, with reference essentially to the differential diagnosis between pseudo tabes, or tabes periphica, and tabes dorsalis, and the other aspects of the diseases will not be touched upon, save for such reference to the pathology and prognosis as may be necessary, as the subjects to be dealt with

agent, possibly useful both in the diagnosis and in the treatment of many types of functional disease. —*Med. News.*

CALOMEL.

A Study of its Physiologic Action and Therapy in Gastro-intestinal Disorders in one Hundred and Forty-four Cases—Is it a Diuretic *per se?*

The physical properties of calomel are so well known to the profession that they need little consideration here. One point presents itself at this time and that is, Do you examine into the purity and quality of the calomel you use, or do you accept it as perfectly pure? Have you ever stopped to ask yourself the question why your large doses of calomel always caused griping and pain in the majority of cases?

Calomel is subject to adulteration; to improper purification in manufacture; and to chemic changes both atmospheric and in chemic mixtures. Bichloride of mercury is the most common impurity found in it, and this varies from the smallest to comparatively large amounts. Many instances are on record where the usual large doses of calomel have produced violent griping, cramps and gastro-intestinal catarrh which were undoubtedly caused by the presence of bichlorlde of mercury rather than a special idiosyncrasy. In fact, instances of fatality are reported from the administration of large doses of calomel contaminated with this poison.

On the other hand, calomel may contain such large amounts of barium, calcium, lead and other impurities that its action is greatly lessened and rendered almost inert. With these thoughts before us, and a thorough knowledge of making appropriate chemic tests for their confirmation, we can often explain many untoward actions which might otherwise be attributed to a pure preparation.

The methods of administering calomel have undergone a great change during the past ten years, and in general and special applications have been carefully studied and extended. It is an axiomatic fact that calomel should never be administered with acids or clorides, and not at a time when the stomach is performing its digestive functions, owing to the danger of chemic change from the mild chloride into the bichloride, thus giving the effects of the latter drug. Until recent years, calomel has been administered in its purity, or in combination with other drugs, in doses varying from one to forty grains and in many cases the patient was an innocent victim to an overdose. To-day calomel should be thoroughly triturated with sugar of milk and administered in doses of one-half to five grains. Why this change?

Calomel plain is a heavy drug; is very slowly assimilated and absorbed, owing to its extreme insolubility and the size of its isolated crystals. In this form it is not in its finest state of subdivision, and is confined to a smaller area of distribution over the tissues of the alimentary tract. Calomel, when thoroughly triturated with sugar of milk, is brought into its finest state of subdivision and its presence can be readily demonstrated with the ammonia test in trituration of 1 part in 1000, thus demonstrating the possibility of administering it in such small doses if desired. One grain of triturated calomel is capable of distribution over a wider area than the pure drug alone; is in a finer state of subdivision; is much more readily brought into a condition for absorption.

With a view of demonstrating the value of the pure drug and its trituration, I selected a number of cases in which both preparations were used at different times in the same subject, and under circumstances as nearly similar as possible. The dose selected was one grain of the pure drug and a one grain trituration with sugar of milk. The dose was administered at bedtime. In the majority of the cases where the pure calomel was given there was no evidence of a bilious stool until the next evening, and in many of them there was no apparent action at all. These same individuals some days or weeks later responded so violently to a one grain trituration that next morning one to five bilious stools resulted; and in one, who had not responded readily to the one grain pure, there was such a large number of evacuations produced that measures had to be used to check the bowels. This may be considered a mere matter of coincidence, but my clinical experience teaches me that one grain of thoroughly triturated calomel is worth an equivalent of five to ten grains of the untriturated drug. A simple mixture of calomel and sugar of milk will not produce any better results than the pure drug alone.

When given for its purgative effect, or for its action upon the liver, it is my custom to administer a one-tenth grain trituration every hour or half hour until free evacuation occurs or until one grain is taken; when, if necessary, liquor magnesii citratis is given in one ounce doses until free action is obtained. During the last four years of practice I have not found occasion to use more than one grain of the drug in the same individual for this purpose. A one-tenth grain trituration at bedtime will produce excellent results in small children, except in those who are habitually constipated, when the former method must be used. There is a certain amount of propriety in administering calomel with bicarbonate of soda, as it will prevent the formation of bichloride and, as calomel is most readily absorbed in an alkaline medium it is synergic.

After administering calomel in a large number

of cases and carefully noting the results upon the various organs, I have failed to appreciate the so-called diuretic effects of the drug *per se*. It undoubtedly acts *indirectly* to a slight extent, simply by its general stimulating action upon the emunctories of the entire body thus favoring secretion, excretion, and the elimination of intestinal ptomaines and systemic poisons, all of which act unfavorably upon the secretory and excretory organs when present. In a case of scarlatinal nephritis in a little girl of six years, with decreased amount of urine, calomel in both large and small doses produced no appreciable diurectic effects, while the ordinary diuretics acted nicely. A man of sixty-five, showing mitral disease, chronic Bright's disease and œdema of the lower extremities would not manifest diuretic effects from large doses of calomel frequently repeated, but responded to alkaline diuretics readily. In giving the drug to over one hundred children, in varied doses, I have never noted diuretic effects which could be ascribed to it alone.

Dr. Wm. Pepper has recently reported a case of Bright's, complicating aortic disease, where large doses of calomel were followed by diuretic effects, and where there were manifested no toxic symptoms from its prolonged use in doses of ten grains daily. His experience does not seem to point to its general diuretic action except in large doses, and then it is often uncertain in its effects. While I am still closely observing results in its use, yet I am not convinced that any diuretic action other than a very indirect one is produced by calomel. Typical biliary stools have almost invariably followed the use of the triturated preparation in doses exceeding one-quarter to one-half grain. In some cases there was a regurgitation of bile from the duodenum into the stomach, producing obstinate vomiting. Calomel undoubtedly increases the secretion and excretion of bile by its direct stimulating action upon the cells of the liver. To this cholagogue action is partially if not wholly due its beneficial results in treating diarrhœas.

How does calomel act in diarrhœas? When taken into the stomach in large doses it is slightly irritating; part of it is absorbed and the remainder enters the intestines, where it is further absorbed and possibly may have a slight local antiseptic action. Systematically it acts upon the liver, producing increased flow of bile, which enters the duodenum. Bile is nature's antiseptic and acts in neutralizing ptomaines, preventing germ growth, sometimes destroying germs themselves and aiding digestion. It increases peristaltic action and intestinal secretions, and thus assists nature in cleansing the bowels by the production of free biliary stools. The cause once removed, the cure is apparent. Small doses of calomel act more by a direct cellular impression, by which the cells of the stomach and bowels are stimulated to renewed physiologic activity. The action upon the liver is the same as in large doses, being proportioned to the size of the dose.

I desire briefly to report the results of treatment in one hundred and forty-four cases of all forms of diarrhœas which I have noted in my work, all of which terminated successfully under the action of calomel alone and in combination. Seventeen cases in adults, all of which were due to the ingestion of improper food. Diarrhœa varied from a mild to a very profuse type. Twelve powders were made from one grain of triturated calomel and one-half grain of podophyllin and one powder given every two hours until free bilious stools were produced. From two to six powders usually gave a curative result—dietetic measures being observed as in all the cases here reported. No astringents or other medication was necessary.

Nine cases of the so-called bilious diarrhœa in adults responded rapidly to one-quarter grain triturate of calomel every four hours for two to four doses. Only one of these cases proved obstinate, and it rapidly reacted to one grain doses of sulpho-carbolate of zinc every hour for six doses.

Sixty-eight cases in children from two months to ten years all received a saline cathartic of liquor magnesii citratis as preliminary treatment. This was followed by a trituration containing one one-hundredth of a grain each of calomel and powdered ipecacuanha every one to four hours. The action of this combination in controlling the nausea and diarrhœa in these cases was marvellous. The saline was often sufficient in other cases, but in those where it was not, the small doses of calomel and ipecac worked excellently. I have seen some cases so obstinate that all other forms of treatment failed, but the institution of this method, combined with strict dietetic and hygienic measures, brought about cures. It also gives me best results in treating adults suffering with diarrhœa, nausea, vomiting, cholera morbus, dysentery, and the diarrhœa of typhoid fever. One case of slight but obstinate dysentery in an old man of seventy-five years failed to respond to ordinary methods, but quickly subsided under this small dose of calomel and ipecac every two hours.

Twenty-five cases of obstinate diarrhœa, which had been running some days before consultation, all responded rapidly to a combination containing one-tenth grain of calomel and one grain each of lactopeptine and sulpho-carbolate of zinc given every two to four hours. Four cases of the diarrhœa of typhoid fever responded rapidly to this same combination given every four hours.

I have met with twenty cases of diarrhœa following excessive use of alcoholic liquors, and in every case have succeeded in getting absolute results in one to three days by administering a combination of one-fiftieth of a grain of calomel and one-hundredth of a grain of podophyllin every

three or four hours as required. Two to four doses answered in several, while others proved rather obstinate but responded in the end.

In summarizing the results in these one hundred and forty-four cases, I am not presenting entirely new facts to you, but merely adding clinical testimony to the true efficiency of calomel and its eliminative power as contrasted with the evil routine methods of astringency and opium in treating diarrhœas. These cases are not selective, but followed each other in succession. It is my general experience that diarrhœas will respond more rapidly to doses varying from one-tenth to one-hundredth of a grain of calomel, thoroughly triturated, than to larger amounts. While these small doses may seem homœopathic to many; they are not presented as such, but are given with a full knowledge that they will give certain clinical results which cannot be obtained from larger amounts.—W. Blair Stewart, M.D., *in Jour. Am. Med. Assn.*

WHAT IS CROUP?

It is now a little more than a century ago that Homn, of Edinburgh, introduced the term croup into medical literature. It was no doubt intended by him to denote a new disease of children, or, at least, to make clearer one at that time not fully understood. The term croup since then, however, has been corrupted to designate only the most marked and alarming feature of a group of diseases affecting the larynx in children. It can be readily understood how such a corruption should occur, first with the laity, and later with the medical profession. The danger of the disease, as originally described, was soon associated by anxious mothers with the quality of the cough, and this, without further investigation, was often accepted by medical men, until custom became almost a law in the matter. So much confusion appears to exist in the minds of many young physicians, and old ones also, even at this end of the nineteenth century, in clearly recognizing the different diseases of the larynx characterized by the unnatural, ringing, resonant, metallic tone of the cough, which originally suggested the term croup, that I have thought an effort to elucidate and define, in a concise manner, *what is croup*, would not be inappropriate.

The name is misleading, in so far as the appreciation of danger is concerned, not only to the laity, but to the profession as well; because the feature of the croupy cough does not convey an accurate idea of the condition producing it, so that such a high authority as Trousseau has said that "croup is not croup"; referring, as many will always do, to the quality of the cough as an indicator of the disease. The late Prof. Fordyce Barker has placed upon record the statement that in twenty-five years' practice of medicine, he did not lose but three cases of croup, and these were seen in consultation only. He attributed his phenomenal success to the treatment he employed, which was emesis, with turpeth mineral, *ab initio*, and later, the use of veratrum viride, to keep the pulse down to eighty per minute. In two of his cases, casts of membrane were vomited. It would seem, from such a statement, that even so clever a practitioner as Barker must have lost sight of the true distinction of the different diseases in which the feature of croupy cough forms so prominent an element. To make matters clear at the outset, the term croup is here used in its properly accepted sense, to mean a pathological stenosis or narrowing of the calibre of the larynx from the deposit and growth of an exudation or false membrane upon its mucous surface. A stenosis of the larynx may be due to other causes, such as an acute swelling of the mucous membrane covering the vocal cords or glottis, either from catarrhal congestion, the inhalation of steam, or mechanical injury. The condition of stenosis from these causes is, for the most part, uninfluenced by pathogenic changes, such as result in a formation of exudate, and, therefore, need not be considered as entitled to be called true croup.

The affections of the larynx that are most likely to be confounded by the young physician with croup are *laryngismus stridulus*, or thymic asthma, as it is sometimes called, and *catarrhal laryngitis*, which, to make matters more confusing (owing to a similarity of names), has been, and is even yet, called by some writers, stridulous laryngitis.

Laryngismus stridulus is practically a manifestation of rickets, and should, under no circumstances, be confused with either catarrhal laryngitis, miscalled stridulous laryngitis, and certainly not with true croup, which is always either primary diphtheria or pseudo-diphtheria of the larynx. It is the "holding-breath spell of rickety infants, and is incidental to infancy only. After a more or less prolonged pause of respiration, during which the face becomes livid, and convulsive twitchings of the muscles of the face and extremities may occur, there is a loud, crowing *inspiration* of a rough, grating tone. These spells may be repeated frequently in a short space of time, or may occur at longer intervals throughout the day. They are not to be confused with the snorting breathing of new-born infants. The ready recognition of catarrhal laryngitis or *false croup* is not always so easy, though it is hoped that points here given may be of some aid. Catarrhal laryngitis is manifested in two forms, the *spasmodic* and the *simple*. The spasmodic form is not so difficult to distinguish. It comes on suddenly at night, waking the child out of its sleep, rarely occurs under one year of age, and there is usually a

history of a disposition to former attacks, or enlarged tonsils, post-nasal catarrh and its sequent, adenoid growths of the pharyngeal vault. Its most prominent features are a loud, metallic, ringing quality of cough, with attacks of alarming dyspnœa. These symptoms usually subside to a marked extent through the following day, when only a slight hoarseness of voice will be noticed. The attacks of cough and dyspnœa may occur, to a less degree, for two more nights, when recovery is prompt. The attacks of dyspnœa do not last longer than ten or fifteen minutes; in their interval respiration is not difficult. In the simple form of catarrhal laryngitis the attack comes on more gradually, with hoarseness of cry or voice, and ringing tone of cough. It may begin during the day, but is decidedly more marked in the night. It may occur at all ages up to seven years. There is, at the onset, a marked rise of temperature, but the child shows no special signs of discomfort that could be referred to the larynx. There may be attacks of difficult breathing, but they occur either towards or during the night, never during the day. An exception to this was recently observed in a child one year of age, during an attack of influenza, where the diagnosis for a few hours was in doubt. The hoarseness of voice and ringing cough may persist in the day-time, even accompanied with noisy or hissing breathing; but the difficulty in respiration will always be noticed on *inspiration*, expiration being quiet and easy. The voice is never muffled or completely lost, except, perhaps, during an attack of dyspnœa. After the first few days, all of the symptoms tend to improve. The pharynx, in the act of gagging, becomes filled with muco-purulent secretion; the cough becomes softer, and a bronchitis may follow, from extension of the catarrhal process into the bronchi. The hoarseness and cough may last for a week or more, but, except in very severe cases or those complicated with diphtheria, there is no *progressive development of the disease.*

It cannot be denied that simple catarrhal laryngitis is somesimes fatal, but the rarity of such ending may be judged, when Trousseau, in an immense practice, extending over many years, saw only three deaths.

The cases of simple catarrhal laryngitis that are most perplexing in the matter of diagnosis, or those upon which have been engrafted the germs either of diphtheria or pseudo-diphtheria, during the progress of the attack. A history of exposure to contagion will be of great assistance in such cases, besides the observation that the difficulty of respiration grows steadily worse after the case had commenced as one of simple catarrhal laryngitis.

Two cases of laryngitis, one accompanied by membranous exudation, from entrance of foreign bodies into the larynx, are reported by Dr. Wharton in "Keating's Encyclopædia of Diseases of Children." These cases presented all the symptoms of true croup, and are mentioned here as rare cases.

Ashby and Wright mention the relief given from inhalation of warm, moist vapor, from either a croup kettle or steam tent, as an important aid in the diagnosis of catarrhal laryngitis from membranous croup in the early stage of the disease. The relief given in the catarrhal laryngitis is marked and permanent, the contrary being the rule in diphtheria and pseudo-diphtheria of the larynx. Steiner regarded sneezing and coryza as signs favorable to the indication of catarrhal laryngitis, true croup, or what is commonly called membranous croup, is either primary diphtheria or pseudo-diphtheria of the larynx. When the exudation is seen in the pharynx or nose, diagnosis is clear, but where no such evidence is presented, bacteriological examination will show that it is one or the other of these affections, notwithstanding the statement of Dr. Dickey in the *Medical Age* for January, 1894, to the contrary. A swab culture taken from a probang, wrapped with a little clean cotton wool (slightly scorched by passing hurriedly over an alcohol flame), which has been dexterously inserted into the larynx of the patient, will show either the diphtheria bacillus, or the streptococcus, with the pseudo-diphtheria bacillus of pseudo-diphtheria, in twenty-four hours. The vast importance of an early diagnosis in these cases will be at once recognized, when the knowledge it gives, not only points out the right course for treatment, but aids in guarding against the further spread of contagion.

According to a recent report of the bacteriological department of the Board of Health of this city, out of 286 cases reported of so-called membranous croup, during a period of ten months, eighty per cent. proved to be true diphtheria, fourteen per cent. pseudo-diphtheria, and six per cent. were doubtful. One hundred and ninety-four of these were of primary laryngeal origin, no exudation being visible in the nose or pharynx. The bacteriological department of the Board of Health of New York now advise *membranous croup* to be included in the list of contagious diseases.

The suggestions offered for making an early diagnosis in true croup, are well enough for city practice, but in the country and small towns no such opportunities exist for scientific investigation, and reliance must, as formerly, be placed upon a correct interpretation of clinical phenomena.

The clinical picture of both forms of catarrhal laryngitis being well impressed upon the mind, the contrast picture of true membranous croup may be brought out in bolder ralief. Let it first be borne in mind, that the only difference between

diphtheria and pseudo-diphtheria, concerning its location in the larynx, is, that one shows upon bacteriological examination, the Klebs-Loeffler bacillus, and is more fatal, systemically, than the other; which shows the pseudo-diphtheria bacillus with the streptococcus in mild cases, and both the staphylococcus and streptococcus in severe cases. Both forms of exudation are capable of producing a fatal stenosis of the larynx, and are contagious.

Membranous croup, true croup, is most insidious in its onset. If other cases of diphtheria or pseudo-diphtheria have been known to occur in the same family or neighborhood, the diagnosis will be greatly aided. The patient may not show any marked signs of illness in the beginning. There is little or no rise of temperature, perhaps a slight loss of spirits or appetite, but the patient will have a peculiar expression of apprehension of some impending danger. Later, there is a sense of marked discomfort referred to the larynx. The voice is at first hoarse or husky. This gradually increases in development until it is either suppressed or completely lost, not only during the attacks of dyspnœa, which soon follow, but in the intervals of the attacks as well. The cough, which is at first ringing and metallic in tone, soon becomes smothered and less frequent, until it is unnoticed. The attacks of dyspnœa begin at long intervals, which gradually grow shorter, irrespective of day or night, until *difficult respiration, which is the marked distinguishing feature of true croup*, becomes continuous. This is accompanied with a loud, harsh and hissing sound, heard, even in the early stage, both on inspiration and expiration. There is depression of the substernal and supra-sternal and supra-clavicular spaces on inspiration, in the advanced stage. In a word, *all* of the signs of difficulty in breathing are progressive in character, until relief is given to the stenosis either by a spontaneous expulsion of the membrane during a fit of vomiting or coughing, or by surgical interference. After the second day, in true croup, albumen will most likely be found in the urine. The lymphatic glands of the submaxillary region are often enlarged in true croup; but almost never in catarrhal laryngitis.

To repeat: Catarrhal laryngitis or false croup begins suddenly, either with an attack of dyspnœa and croupy cough, or croupy cough alone. Membranous croup, which is either primary laryngeal diphtheria or pseudo-diphtheria is most insidious and slow in its onset. False croup is always worse at night and better in the day-time; membranous croup, while it is worse at night, persists in all its unfavorable features through the day-time as well. The loud, ringing cough in false croup does not change its quality, and is more noticeable than the hoarse or smothered voice; in membranous croup the ringing cough is soon lost, becoming smothered, and is far less noticeable than the hoarse, husky voice, which finally becomes almost suppressed. In the interval of the attacks of dyspnœa in false croup, respiration is difficult, or harsh only on inspiration; in membranous croup it is so both on inspiration and expiration. In false croup the attacks of dyspnœa occur only at long intervals; that is, either at night, or, if in the day towards night; in membranous croup, the intervals between the attacks grow steadily shorter, until difficult, or harsh, labored breathing is continuous. No reference is made to laryngoscopical examination, as it is at best most difficult for the general practitioner to accomplish, and is annoying to the patient. Moreover, the diagnosis can be made without it.

Other diseases, such as measles and scarlatina, are likely to be complicated with croup. Whenever such a complication occurs, it may safely be regarded as diphtheria or pseudo-diphtheria of the larynx.

Nothing is intended to be offered as to details of treatment, but it must be at once apparent to all, how important a matter the differential diagnosis of the various laryngeal disorders, attended with croupy cough or voice, in children, is, as bearing upon an honest and correct treatment. While a simple emetic or steam inhalation, with the internal administration of a diaphoretic, will suffice in false croup; or cold sponging several times daily, together with the internal use of cod liver oil and phosphorus, will do in laryngismus stridulus; any such waste of valuable time would be criminal in the management of true croup. Here we have to treat the effect of the disease upon the general system, as well as the local condition; but, while much improvement in our past methods may be possibly obtained by the newly introduced serum-therapy, the resort to calomel sublimations and intubations will continue to be necessary, in order to tide the patient over the dangers of suffocation. Thorough disinfection in every direction should always be carefully borne in mind in the management of true croup.—S. H. Dessau, M.D., in *Archives of Ped.*

SULPHONAL AND TRIONAL COMPARED.

During the last few years several hynotics, differing in value, have been introduced to the profession. Among the drugs of this class two, sulphonal and trional, deserve especial favor; and it may be interesting briefly to compare them, as they both give good results, yet differ so much in their effect that it is well to know to what class of patients each is the more suitable.

Sulphonal is sparingly soluble in cold water, and is slow in its action. Sometimes as long as two

or three hours are required for it to induce sleep. So slow is it at times that patients became impatient waiting for its effect, hence it is better to give it in the evening a while before bedtime. I have sometimes thought that the slowness of its action interfered with the induction of sleep, the patient becoming so nervous waiting for sleep that he was thoroughly aroused. The effect of a full dose, however, continues long; and it will often produce sleep the second night, and in a few cases even the third.

Trional is much more soluble. It produces sleep much more quickly, within a few minutes. In one case the drug was taken before preparing for bed, and its effect was felt so soon that it was an effort for him to get into bed. Its action is less prolonged than that of sulphonal. I have never known it to produce sleep on the second night as markedly as sulphonal, though patients may sleep well the night after taking it, but not from its direct effect.

The day after taking sulphonal there may be great drowsiness during the day. This is less likely to occur after a dose of trional, and if it does is much less intense.

In consequence of the more rapid action of trional, some patients much prefer it to the slowly acting sulphonal. This is especially true of those who have difficulty in getting to sleep when they first go to bed. Those who suffer from this form of insomnia became impatient at their inability to sleep, and each minute finds them more restless; indeed, it is in part owing to this restless nervousness that they are unable to get to sleep, and for this reason they are desirous of seeing an early result from any medicine they take. To such patient it may be well to give trional.

Another class of patients have no difficulty in going to sleep when they first go to bed; but they wake in a short time and lie awake two, three or four hours, or may have no more sleep that night. To this class sulphonal is the better drug, as it does not interfere with the first early sleep of the night, and acts later so that the patient does not wake at midnight as usual.

The effects of trional do not continue so long towards morning as sulphonal. It gives good refreshing sleep for four or five hours, or perhaps six; then the patient wakes and does not sleep again. In such cases it is possible that the next time a larger dose will produce a longer sleep. The effects of sulphonal are more likely to continue through the whole night until morning.

The dose of either of these drugs is 10 or 20 grains. In many cases 10 grains are sufficient, but where there has been obstinate wakefulness it is better to give more, 15 or 20 grains. I have only very rarely given 30 grains of sulphonal. I have never had occasion to give more that 20 grains of trional; possibly not having tried it in such obstinate cases as the other drug. In the case of either drug it is better to give one sufficient dose than to give two or more insufficient doses.

After taking sulphonal there is not infrequently more or less cerebral heaviness and distress the next day. In a few cases the discomfort has been so great that patients have objected to taking the medicine, and preferred to get along with less sleep. I have found much less of this unpleasant effect after trional. One patient, who refused to take sulphonal on account of this after-effect, had little or no discomfort after a dose of trional.

After 15 or even 10-grain doses of trional, I have known slight vertigo or dizziness to be felt before sleep was induced, if the patient rose from bed, lying down caused this to cease; but for a short time it was somewhat distressing. I do not remember this after the ingestion of sulphonal. It may be well, therefore, to warn some patients not to rise after taking trional, to wait until fully ready for the night before taking it, and then to stay in bed without getting up so as to avoid this unpleasant experience.

Sulphonal may be given in small doses, not more than five grains, to quiet restlessness in neurasthenia, hysteria and mania; given three times a day and, if necessary, during the night, it will often have a most soothing effect. I have not tried trional in this way, but should not expect such an effect, as it acts so much more quickly and its action is so much less lasting.

It will be readily seen from this comparison which of these two drugs to choose in combating insomnia; but it must be remembered that neither is a certain cure for this distressing symptom, and that the treatment must be directed to the patient's condition and not simply to the symptom insomnia. —*Boston Med. and Surg. Jour.*

DOES ETHERIZATION CAUSE CROUPOUS PNEUMONIA?

We have called attention in recent numbers of the *Therapeutic Gazette* to the fact that ether may produce secondary effects which are frequently credited to intercurrent diseases following the operation rather than to the administration of this anæsthetic. In an interesting paper upon this subject in the *Boston Medical and Surgical Journal* for March 28, 1895, Prescott details two cases in which acute croupous pneumonia followed etherization. In discussing the question as to the ether being the exciting cause, he is careful to point out that in recording instances of this kind we must take care to carefully separate the instances of broncho- or catarrhal pneumonia from the true croupous variety. Every one with experience has probably seen some cases in which

broncho- or catarrhal pneumonia followed etherization, but Prescott states that in looking over a large series of records he found that croupous pneumonia was a very extraordinary sequela.

We can readily understand why it is that broncho-pneumonia and catarrhal pneumonia so frequently follow etherization, since the chilling of the lungs as well as the entire body in association with great irritation of the mucous membrane of the bronchial tubes and smaller air-passages readily results in congestion, stasis, and a certain amount of consolidation. The frequency with which croupous pneumonia is produced by etherization must depend almost entirely upon the presence or absence of the infectious micro-organism which is now recognized as the cause of this disease. While at the present time clinicians are practically in accord that exposure to cold itself cannot alone produce pneumonia, they also believe that the exposure to cold may so decrease the vital resistance of the patient that the micro-organism of pneumonia, which was formerly unable to produce a pathological process, finds a suitable field for its growth and multiplication. In an earlier number of the *Gazette* we called attention in a leading article to the very great loss of bodily temperature which is apt to ensue during and after the administration of ether, and it seems to us self-evident that both the broncho, catarrhal, and croupous forms of this disease might in a certain proportion of cases be prevented by the maintenance of bodily heat during, as well as after, the operation. Even if this be done, the irritation of the respiratory passages by the vapor of the ether may be quite sufficient to cause the irritation which opens the way for the infectious process.

The answer which Prescott believes is the correct one to the question which heads this editorial is that ether very rarely acts as the exciting cause of acute lobar pneumonia, and therefore even when this disease occurs it must be regarded rather as a coincidence than as the outcome of cause and effect.—*Ed. Therap. Gaz.*

MEDICAL NOTES

Salicylate of soda is recommended by Chibret in Basedow's disease as being quick and lasting in beneficial effects.

It is stated that the best remedy for bed-wetting in children is Normal Liquid Ergot.

A mild gargle will usually be more beneficial in simple pharyngitis than a markedly astringent one.

The oil of eucalyptus will be found very useful in some forms of rheumatic headache, or in cases of headache due to malarial fever.

There is perhaps no one remedy which is so efficient in all cases of asthma, regardless of their source, as sodium iodide.

Dr. Weill claims that every form of vomiting during gestation, can be relieved by a twenty per cent. solution of menthol in olive oil; dose, ten drops on sugar whenever nausea appears.

Dr. Elmer Lee, of Chicago, claims that hydrozone is better than peroxide of hydrogen for internal administration, he having given both in a large number of cases of typhoid fever.

Dr. Roberts Bartholow gives papain in ten grain doses t.i.d. for tapeworm.

Fifteen-grain doses of salipyrine is advised in the treatment of menorrhagia of the climacteric.

Salicylate of strontium is considered one of the best intestinal antiseptics in doses of five grains. In doses of ten to fifteen grains it acts decidedly in gouty and chronic rheumatic conditions.

Methylene blue applied to abrasions of the os uteri by means of a cotton probang, is an effectual remedy.

For erysipelas, paint the parts with ichthyol with a little carbolic acid. It will relieve the pain, protect the parts, and check the progress of the disease.—*Med. Summary.*

THE ECONOMICS OF PROSTITUTION.—(*The Medical News.*)—At the recent meeting of the American Academy of Medicine in Baltimore, Dr. Woods Hutchison, of Des Moines, Iowa, said that reproduction is heaven's first law. "Be fruitful and multiply" is the first commandment in Genesis, and yet every religious or moral code has inveighed against the sexual instinct. It is hard to control, but instead of being degrading it is of the highest rank and holiest nature. Upon this foundation are built the whole of morality and the social instincts; the family is the nucleus of civilization.

And yet everything connected with the sexual instinct is tabooed in polite society. Modesty affects to ignore its existence. Boys and girls are kept in disgraceful ignorance of one of their most important functions. From this arise many forms of vice. The second evil influence of this denunciation and taboo is to destroy the feeling of obligation to bear children. Married men and women are either refusing or limiting their output to two or three. This is the fruitful source of prostitution, abortionism, onanism, and mental and moral degeneracy. Parents need training as well as children, and no man's or woman's education is more than half completed without such education.

What, then, is the excuse for this ban which has been laid on the sexual instinct? Its excesses

solely. To hear most sermons one would think that adultery, fornication and prostitution were its principal results. Its beneficial results overbalance these a hundred to one.

Even its excesses have their uses; they are a means of sterizing or exterminating the unfit. This is especially true of prostitution. It has the earmark of a process of nature having existed from the earliest ages in every clime, under every religion (a part of the cult of many, in fact). It has been attacked with merciless severity, absolutely forbidden, crushed out, "regulated," and with only one effect, to cause it to flourish with greater vigor and wider effect. "Regulation" simply does not "regulate," but increases clandestine intercourse, lessens marriage-rates, lessens fear of arrest and of infection, and increases illegitimacy.

Prostitution is a huge garbage dump, a sewer, a crematory. It draws into it women mainly of the lower class or most degenerate impulses. It cuts short their life expectation. It practically sterilizes them. Very few of them marry, and these are mostly infertile. Only a very small per cent. reform. The chief motives leading to this trade are idleness and love of dress and bad family surroundings. This class of women we can best spare. As to the men, if they get gonorrhœa, they sterilize their wives by salpingitis; if syphilis, they either refrain from intercourse, or abortions result until the virus has run its course.—*South. Cal. Prac.*

THYROID GLAND IN TREATMENT OF GOITRE.—Some time ago Dr. P. Bruns, Professor of Clinical Surgery at the Medical Faculty of Tübingen, announced that he had obtained very encouraging results in the treatment of goitre from ingestion of the thyroid glands of sheep or calves (*The Medical Week*, 1894, p. 526). At that time his experience was limited to 12 cases of goitre, but he has since had occasion to employ this treatment in 48 additional cases, the total number of patients, consequently, being 60, which is amply sufficient to warrant one's drawing definite conclusions as to the therapeutical results.

Of Professor Bruns' 60 patients, 14 were completely cured, the thyroid gland having resumed its normal dimensions; in 20 the result obtained was practically equivalent to a cure, seeing that the reduction in size of the hypertrophied thyroid, though incomplete, was nevertheless very considerable, and the disturbances due to the presence of the cervical tumor had entirely disappeared; 9 patients had improved—that is to say, there was marked decrease in the size of the goitre and the intensity of the disturbances which it determined; in 17 cases the effect of the treatment was *nil.*

One important fact, which Professor Brun had already noticed in the first series, is rendered more prominent than ever, now that he has at his disposal a much larger number of observations for comparison; it is, that the age of the subject has a great deal to do with the therapeutical results. In this respect the patients in question may be grouped in four categories: The first group comprises 7 children from one to ten years of age, all of whom recovered completely. The second group comprises 28 patients from ten to twenty years of age, of whom 21 were cured (the tumor disappearing completely in 7 cases, while in the other 14 a certain enlargement of the thyroid gland persisted, although the morbid disturbances subsided entirely), 4 improved, and three only were refractory to the treatment. In the third group of 14 patients between twenty and thirty years of age, there were 4 clinical recoveries, 3 improvements, and 7 failures. Lastly, in the fourth group of 11 individuals between forty and sixty years of age, there were 2 cases of clinical recovery, 2 of improvement and 7 of failure.

The thyroid treatment, therefore, speaking generally, is the more efficacious the younger the patient. More particularly as regards complete cure, anatomically or clinically considered, of the hypertrophy of the thyroid gland, it is hardly likely to take place unless the patient is under twenty years of age.

The preceding considerations evidently apply only to purely hyperplastic goitres, for thyroid medication can have no effect when the goitre has already undergone cystic, colloid, or fibrous degeneration.—*Medical Week.*

A PATIENT WITH A SILVER TESTICLE.—In weak-minded men the generative organs are not infrequently a fertile source of hypochondriacal delusions. In such cases the slightest deviation from what is believed to be the normal condition of the parts, or their functions, is magnified at once into a physical defect, But where the mental calibre is wanting in the patient, nothing is more difficult than to make an impression for good, with sound advice and reiterated exposure of fallacies, such as, for example, is the case with those unfortunate persons who have perfectly convinced themselves that "something is wrong" with their generative organs. A notable instance of this has been recorded in the current number of the *American Journal of Insanity*, by Dr. Hermance. A young man, aged twenty-one, consulted the author in consequence of having only one testis, a defect which had preyed upon his mind even from his childhood, and so much so lately, that he had been unable to sleep. On examination it was found that the left testis had not descended into the scrotum, but in all other respects the parts were in a perfectly normal state. The position of the retained testis precluded any attempt being made to bring it down, and, despite the patient's urgent entreaty to have something done, he was advised

that nothing was necessary. In a few days' time the man returned and confided to the author that he was about to be married, that he had made up his mind that he could not have any children unless he possessed two testicles, and that he would not marry until the defect was made good. Under the circumstances, therefore, the author, after consultation with a colleague, agreed to attempt to bring the retained testis down. But this attempt had to be abandoned. Accordingly, the patient was informed of the result, and he immediately said, "Why can you not introduce an artificial testicle." This suggestion was acted upon. A model of an ordinary-sized testicle was made in silver, and on an appointed day the patient was chloroformed, the tunica vaginalis opened, the silver testis introduced, and the wound afterwards closed. The patient in five days' time was out of bed; he returned to business, and has ever since worn the silver substitute for the absent organ. His marriage took place shortly after the operation, and he has become the joyful father of two children. All's well that ends well.—*Med. Press.*

Treatment of Affections of the Heart Following Influenza—Dr. Ernest Sansom gives an account in *The Practitioner* of the nervous disturbances of the heart following influenza, and adds some practical points in treatment. For influenza itself, Dr. Sansom seems to rely chiefly on sulpho-carbolate of soda in half-dram doses, for what reason he does not tell. He adds to this, however, when needed, quinine and phenacetine for fever, and, in adynamia, five grains of musk.

The signs and symptons referred to the heart resulting from influenza, in cases under the writer's observation were thus distributed: In one hundred cases: pain referred to the heart, twenty-three cases; the rapid heart (tachycardia), thirty-seven cases; the irregular heart (arhythmia cordis), twenty-five cases; the slow heart (bradycardia), five cases; organic disease of the heart, ten cases.

In heart pain he give a hypodermic of morphia with a diffusible stimulant, such as: Spiritus etheris, ℥ ss.; spiritus ammonia co., ℥ ss.; tinct. sumbul, ℥ ss.; aquæ camphoræ, ℥ iss.; to be taken as a draught before the administration of morphia, and repeated an hour afterward. Once the severity of the pain is thus mitigated, other agents than morphia should be employed. Quinine in five-grain doses dissolved in hydrobromic acid is often very effectual. Local sedative and counter irritant applications may also be required.

Tachycardia after influenza is sometimes not noticed, and the pulse may not be much above 100. Some of the vaso-motor and eye symptoms of Graves' disease may be present. Dr. Sansom regards digitalis and strophanthus as not only useless but dangerous, and he also avoids opium. He prescribes bromides with arsenic and symptomatic drugs for dyspeptic symptoms which are apt to be present. In many cases drugs are of no avail, and he advises that a mild galvanic current be given three times a day for six months! He states truly that patience is required. The irregular heart is usually associated with symptoms like those with tachycardia, and much the same treatment is indicated.

Bradycardia sometimes occurs, and may be severe and persistent. In one case the pulse fell to 19 per minute. Phenacetine and camphor with local warmth and counter-irritation are effective in mild cases. In the more obstinate tincture of belladonna may be given in ten-drop doses.—*Medical Record.*

Paralysis Consecutive to a Pseudo-Membranous Angina Recognized as Non-Diphtheritic by the Bacteriological Examination.—Under the above title Bourges (*Archives Experimentelle de Pathologie*) describes a case with the clinical picture of diphtheritic paralysis, but in the throat of which no Klebs-Lœffler bacilli were found. The case occurred in a boy of seven years, in whom appeared suddenly high fever, headache and pain in the throat. The next day the tonsils were gray and swollen, but no false membrane was present. Two days later the local signs had gone. Nine days from the first attack a second attack of malaise and fever occurred, with marked erythema on the neck, forearms and limbs, but not on the trunk; the throat was normal, and the eruption disappeared two days later without desquamation.

A week from the beginning of this second attack the patient was taken with headache, fever and sore-throat, and the next day a white, easily detachable false membrane was present over the tonsils; this remained until seventeen days later, when it had entirely gone, and the child was in fair health, though remaining pale and thin.

Sixteen days after the disappearance of the membrane the child became restless at night, and the next day complained of abdominal pain and headache; a little fever was present.

Two days later convergent strabismus developed, followed in forty-eight hours by usual intonation of the voice and regurgitation of liquid food.

The regurgitation disappeared in a short time, but three days after its appearance the child was unable to stand, though still able to move its limbs in bed.

The paralysis remained incomplete, sensation normal, knee-jerks absent. Cure was complete at the end of two months.

The bacteriological examination of the false membrane showed the only virulent organi-

present to be the streptococcus pyogenes. The child's mother, who had been constantly nursing him, was attacked during his illness by a similar pseudo-membranous angina in which the sole pathogenic organism was the streptococcus pyogenes.—*Amer. Jour. Med. Sci.*

THE PARASITES OF MALARIA.—Professor Wm. Osler, of Johns Hopkins University, communicates some general conclusions on parasites observed in types of malarial fevers in and about Baltimore. The observations cover more than 600 cases, in all of which the blood has been carefully studied. Three varieties of the malarial parasite are distinguished, viz.: (1) the tertian parasite; (2) the quartan parasite; (3) the æstivo-autumnal parasite.

(1) The *Tertian Parasite* requires about forty-eight hours to accomplish its complete development, and is associated with relatively regular tertian paroxysms, lasting on an average between ten and twelve hours, associated almost always with the three classical stages—chill, fever and sweating. Infection with two groups of tertian organisms frequently gives rise to quotidian paroxysms; infection by multiple groups of organisms rarely give rise to more irregular subcontinuous fevers.

(2) The *Quartan Parasite* is an organism requiring about seventy-two hours for its complete development. It is rare in this climate, and is associated with a fever showing regular quartan paroxysms similar in nature to those associated with the tertian organisms. Infection by two groups of the parasite causes a double quartan fever (paroxysms on two days, intermission on the third). Infection with three groups of the parasite is associated with daily paroxysms.

(3) The *Æstivo-autumnal Parasite* passes through a cycle of development, the exact length of which has not yet been determined. It probably varies greatly from twenty-four hours or under to forty-eight hours or more. But few stages of development of the parasite are found ordinarily in the peripheral circulation, the main seat of infection being apparently in the spleen, bone marrow, and other internal organs. Infection with this organism is associated with fevers varying greatly in nature. There may be a quotidian or tertian intermittent fever, or more commonly a more or less continuous fever with irregular remissions. The individual paroxysms last on an average about twenty hours. The irregularities in temperature depend probably upon variations in the length of the cycle of development of the parasite, or upon infection with multiple groups of organism.—*Br. Med. Jour.*

LEUCORRHŒA IN THE UNMARRIED.—In the treatment of leucorrhœa in young unmarried women, instances frequently occur in which the usual practice of making an examination to ascertain the condition of the pelvic viscera is so obnoxious to the patient, or so firmly opposed, that the physician is forced to abandon it and have recourse to medicine.

In such cases, Dr. Slocum (*Cincinnati Lancet-Clinic*) depends upon the specific action which cantharides appears to exercise upon the cells constituting the genital as well as the urinary system. It is probable that by direct stimulation of the cells just to the point of successful resistance, the benefit is secured, as the dose is very small. Strangury or other unpleasant symptoms have not been produced. The action of the drug has been so uniformly satisfactory that when it fails such result forms a strong basis for suspecting the presence of something more than simply hyperæmia or mild inflammation. Lessening of the discharge is sometimes noted within five days, but in several cases of profuse discharge of four years' and longer duration the treatment was not successful until after a month's persistent use.

The formula which has seemed the best is:

Tincture of cantharides, ...	96 minims.
Tincture of ferric chloride, . . .	160 "
Dilute phosphoric acid, ...	160 "
Syrup of lemon, ...	2 fluid ounces.
Water, ...	sufficient to make 4 ounces.

One teaspoonful, in water, after meals.—*Maryland Medical Journal.*

HEADACHE.—Dr. Lauder Brunton says that one great difficulty which is to be met with in treating nervous headaches, or so-called bilious headaches, is that once the headache has become severe both secretion and absorption from the stomach are generally arrested, and that any medicine which is taken by the mouth when the headache is fairly begun lies in the stomach unabsorbed and useless. Consequently it is sometimes almost imperative to treat such cases, when the headache is intense, by the subcutaneous injection of morphine. It may not infrequently be noticed that if the headache comes on shortly after food has been taken, for example an hour or half an hour after breakfast, the secretion will have occurred before the pain has commenced, and the gastric juices will dissolve the food. But the food will not be absorbed and will be brought up in full quantity, but well digested, many hours afterwards, say in the evening. Should the headache, however, have become well established before breakfast, and food be taken, notwithstanding the pain, the gastric secretion is often arrested, so that the food will be returned, unchanged, at night.

In consequence of this want of absorption, drugs administered by the mouth, after the pain has

become severe, are of little or no use ; but if taken before absorption has ceased, they frequently act like a charm upon the headache.

This is especially true of antipyrine. Some very severe cases call for subcutaneous injection of morphine. Dr. Brunton highly praises a combination of salicylate of soda and bromide of potassium in these headaches, about half a drachm of bromide and 10 or 15 grains of salicylate in half a tumbler of water, at bedtime, and again in the morning, if necessary.—*Ex.*

THE FALLACY OF EARLY RISING.—Proverbs are responsible for a great deal of folly, and none perhaps for more mischief under the present conditions of town life than those which inculcate early rising as a virtue. When the great majority lived in villages and were engaged in the cultivation of the soil, early rising may have been conducive to health and wealth, if not to wisdom, but even our early forefathers probably did no more than make a virtue of necessity. It is said to be natural—that is, physiological—to rise early and enjoy the beauties of the sunrise ; if we ask why, we are treated to various transcendental theories about the vivifying influence of the sun, and are told to take example by the birds of the air and the beasts of the field, or so many of them as are not nocturnal in their habits. But as a matter of fact physiology, so far as it has anything to say on the subject at all, is all against the early rising theory. Physiological experiment appears to show that a man does not work best and fastest in the early morning hours, but on the contrary about midday. The desire to rise early, except those trained in youth to outdoor pursuits, is commonly a sign, not of strength of character and vigor of body, but of advancing age. The very old, often sleep much, but they do not sleep long. A long deep sleep, the sleep of youth, requires for its production a thoroughly elastic vascular system. The stiffening vessels of age are not so completely nor so easily controlled by the vasomotor nerves. Hence shorter sleep. Thus paterfamilias, who goes to bed at 11 P.M., wants to get up at 5 or 6 A.M., and looks upon his healthy son, who prefers to lie till 8, as a sluggard. When this foolish interpretation of a proverb about the health and wealth to be got from early rising is combined with the still more foolish adage which says of sleep : Six hours for a man, seven for a woman and eight for a fool," then we have a vicious system capable of working great mischief to young people of both sexes. There is a tendancy, greatly encouraged in towns by the spread of cycling, to curtail unduly the hours of sleep. Parties of young men and lads are to be met careering about the streets at midnight. They would be far better in bed. They have probably to be in their offices or shops by 9 A.M., or even earlier and when time is deducted for supper, toilet, breakfast and the journey to the place of business, it is evident that the hours for sleep cannot exceed six, or at most seven. These young men are no doubt encouraged by the silly adage quoted above. There is a disposition in town youths to overdue outdoor exercise ; the cycling club "night spins" are instances in point. As Nordau has said, with a great deal of truth, the town-dweller of these last decades of the nineteenth century suffers from nervous fatigue, and is so ill-advised as to make his very recreations sources, not of recuperation, but of increased exhaustion. If our forefathers were early risers they went also early to bed. It would be well for the rising generation if it paid more heed to this part of the proverb.—*British Med. Jour.*

DISINFECTION OF ROOMS.—Dr. Sheridan Delépine *(Med. Chronicle—Am. Jour. of Med. Sci.)* recommends bleaching powder in solution for the disinfection of poor lodgings in which tuberculous patients have lived, because : "(1) The parts to be disinfected would necessarily be saturated with moisture ; (2) chlorine, in the nascent state, would be generated where it was not wanted, and much smaller quantities of disinfectant would be therefore sufficient ; (3) there would be no necessity to use any complicated contrivance to secure the diffusion of chlorine, or to prevent its escape, though it might be well to keep the air saturated with moisture to prevent the too rapid drying of the walls ; (4) the assistants could apply the material without discomfort, and much less intelligence would be required on their part in the carrying out of their duties ; (5) after the application of the solution, chlorine would continue to be evolved as long as all the chlorinated lime had not been decomposed, and that without anything further to be done after the first two or three hours ; (6) the rooms would be fit for use as soon as dry again, and no poisonous substances would remain attached to their walls, as when perchloride of mercury is used ; (7) if necessary, it is easy to increase its activity by adding acids to the solutions, or by saturating the air of the rooms with acid fumes, and raising the temperature for a few hours."

Three series of experiments to demonstrate the efficacy of this method yielded entirely satisfactory results. The method of procedure is as follows : (1) A solution of chlorinated lime (1-10) should be prepared. (2) The walls, ceilings and floor should be washed with this solution, applied in in the same way as lime or whitewash is usually applied. (3) This process should, for safety, be repeated two or three times in succession. By starting each time at the same corner of the room each layer would have time to penetrate into the paper and partly dry before the next is applied.

utilitarian side of the question. The amount of disease engendered by unlicensed prostitution in all cities and towns is appalling. In great centres, where poverty drives the sufferers to hospitals and dispensaries, and in the army, this is clearly shown. But the evil exists no less in smaller and wealthier communities, where the sufferer consults his private physician and his case is not tabulated in the hospital or government returns.

There is no need for us to enlarge upon the actual money loss to the community, to the suffering, both physical and mental, endured both by the guilty and the innocent, nor to the impaired vitality of the whole race; these matters are well known to every physician.

We are inclined to pride ourselves upon our superior virtue as compared with many European countries, and especially France. The cold-blooded Englishman is supposed to be more continent than his hot, impetuous Gallic neighbor. Perhaps he is, but the outcome of his cold blood, and *absence of regulation of prostitution* shows in 1895, the year in which venereal diseases were most prevalent in the French army, the number of cases of venereal diseases to the 1000 strength, as 74.5 in the French army, to 139.4 in the English army. In 1885 the rate in the British army was 274.4 per 1000; that of the French army for the same year was 52.1 only.

Many other figures could be quoted to show that wherever clandestine prostitution exists the disease rate is high, and that where prostitution is regulated the disease rate is low. The Russian army shows this notably, as compared with the British force. Dr. Commenge, a well-informed and reliable writer on the subject, has concluded that: 1. Venereal diseases are always far more numerous in countries where there is free trade in prostitution than in those where regulations are in force. 2. The regulation of prostitution serves to attenuate the virulence of the venereal diseases and to hinder their progress. 3. The results now adduced are in accordance with the resolutions of the Académie Médecine voted in 1888, when the attention of the authorities were drawn to the dangers of prostitution and to the necessity for safeguarding the public health.

It may be said that these remarks will not apply to Canada. Do not let us deceive ourselves. Canadians are better clothed, better fed and better housed than are Europeans. The animal forces are, man for man, stronger with us. How then are we more virtuous? Do not let us be deceived.

We are not more virtuous. we are not more continent, but the facts are not known.

Would it not be well, therefore, both from a sentimental as well as a utilitarian point of view, that there should be some regulation of the matter? Many an innocent girl would be spared, many a blighted home would be free from stain and sorrow, many a death and an incalculable amount of disease would be avoided if we could but face the *facts* and look upon the matter in a sensible way.

THE ARTIFICIAL FEEDING OF INFANTS.

This subject must continue to be one of paramount importance to the profession. It would seem strange that more uniform and decided views should not be held by medical men in regard to a matter of so vital importance to one of the most interesting of all the classes of our *clientèle*. Nature is very kind, and it is marvellous what effort she will on occasion put forth to conserve the offspring of mothers, who are not physiological enough even to suckle their young, one of the most necessary of all the functions for the preservation of the race.

It may be conceded that the diet of an infant is the most important of all the conditions of its environment. Good air, proper clothing, baths, and cleanliness are all of importance to the welfare of a child, but none of them, nor all of them together, rank in importance with the diet.

In countries like our own, with a long heated term, and a corresponding frequency of infantile alimentary troubles, it is especially important that clear and decided views shall be held, not only by the profession, but, so far as possible, by the general public on the artificial feeding of infants. Cow's milk is the standard food, and perhaps with proper supervision is the best that can be had. It must, however, be diluted, which while it brings the amount of casein near to that of mother's milk, as also the salts, leaves only one half the proper amount of fatty material, and for too small a proportion of sugar. Many devices have been resorted to, to overcome the difficulty, some

of which answer very well in large institutions, and wealthy families where any or all appliances may be had for the asking; but they will not do with the poorer classes, where artificial feeding is much the more common.

Sterilized milk promised a few years ago to take the place of mother's milk, and to get rid of many of the objectionable features of plain cow's milk. But in addition to its being difficult, if not impossible, to procure in every day practice, doubt is now beginning to be thrown upon its value as a food. Some competent observers, among them Dr. Barlow, hold that its long-continued use may produce scurvy. So that, for two good reasons, sterilized milk cannot take its place as an ordinary standard food for infants. All things being considered then, we shall not be able to do better than hold fast to that which we know to be good.

Among the various compounds suggested for the purpose of assimilating, as nearly as possible, cow's to mother's milk, none will be found better than "Meig's Mixture." This consists of: Milk one part, cream two parts, lime water two parts, solution of sugar of milk three parts. This solution is made by adding 17¾ drachms to one pint of water. This Meig's mixture can be readily prepared by the ordinary nurse, which, after all, is one of the great desiderata from a practical standpoint.

Another recipe for the nurse is: Good cream, one and one-half fluid ounces; milk, one fluid ounce; water, five fluid ounces; milk sugar, three and three-eighths drachms.

The old idea that mother's and cow's milk should not be taken at the same time is erroneous. If the mother cannot supply enough nutriment for her child, give cow's milk to supplement her supply. This is better than cutting off the breast supply at once, and, indeed, may make all the difference in a few weeks, between tolerance or intolerance, on the part of the child's digestive apparatus, of a total diet of cow's milk.

Simcoe Medical Association.—The thirteenth regular meeting of the Simcoe District Medical Society was held in the Council Chamber, Barrie, last Thursday, the Vice-President, Dr. W. A. Ross, in the chair. These members were present and took part in the discussion: Drs. Ardagh, Arnall, Clutton, Dunn, Evans, A. Harvie, J. Harvie, Heaslip, Hanly, Howland, Little, Lehmann, McCullough, McCarthy, McClinton, Morton, W. A. Ross, A. Ross, Raikes, Stephenson, Stephen, Wallwin, West, Wells; and Drs. Peters and Primrose, of Toronto, who were present as guests of the Society.

Dr. McCullough, of Alliston, read a paper on "Sciatica," which was discussed by Drs. Norton, Stephen and Peters.

Dr. Lehmann, of Elmvale read a paper on "Morphœa," and exhibited a patient with the disease.

Dr. Peters, of Toronto, presented a patient on whom he had operated for impermeable stricture.

Dr. Primrose, of Toronto, read a paper on "Surgical Treatment of Tuberculous Glands."

After adjourning to a luncheon provided by the Barrie members, at the Queen's Hotel, the Society proceeded to elect the following officers for the ensuing year:

President, Dr. McCarthy, of Barrie; 1st Vice-President, Dr. A. R. Harvie, of Orillia; 2nd Vice-President, Dr. Little, of Churchill; 3rd Vice-President, Dr. W. Lehmann, of Elmvale; 4th Vice-President, Dr. J. W. S. McCullough, of Alliston; Treasurer, Dr. E. D. Morton, of Barrie; Secretary, Dr. Raikes, of Midland.

Hæmaturia.—James W. Osborn, M.D., of Bealton, Ont., Canada, writing to the Editor of *Medical World*, Philadelphia (July Number, 1895), says: "Regarding my obstinate case of hæmaturia, I told you in a previous communication of my patient's restoration to a fair degree of health after a siege of anæmia, emaciation and prostration, but that the hæmorrhage, though more moderate, was still going on. I have now a still more favorable report for you. Having failed to obtain the tannate of soda recommended by Dr. Hutchins, San Francisco, from my druggist, or in the city, I ordered a bottle of Sanmetto, thinking by the time she had given it a fair trial I would be able to get the tannate of soda elsewhere. She had only taken the Sanmetto a week, in drachm doses three times a day, when the hæmaturia disappeared. This was about three weeks ago, and it has not returned unless within a day or two. This is certainly worthy of note, as the hæ

rhage, notwithstanding her great improvement, had never subsided entirely for more than a day, and that only once, in a period of about eight months. While we cannot be sure of the propter hoc from the post hoc, in a single instance, it certainly looks as if the Sanmetto has been of service to the vis medicatrix naturæ. I have just received a letter from an old friend in the profession, who has used Sanmetto with decided benefit to a patient afflicted with hæmaturia."

Therapeutic Briefs.—*Coll. and Clin. Rec.*, Dr. Cantrell, Polyclinic, believes that scarification is the best treatment for *Acne Rosacea*. He freezes the part with a rhigolene spray or ethyl chloride, and freely scarifies with a five-bladed knife. This treatment gives prompt relief.

Sir Benjamin Ward Richardson, *Asclepiad*, 1894-95, in *Medical News*, April 20, calls attention to the occurrence of *Cramps* in the lower limbs in cases of *Diabetes*. They are rare by day and most common at night. They are very painful although not of long continuance. They occur principally in the muscles of the calf of the leg, but they may also involve other leg-muscles and, at times, even distant muscles. In conjunction with this condition there is sometimes a painless motion or twitching of the leg-muscles, observable mostly in the early morning after good sleep, and lasting two or three hours, but passing away during the day. These movements may number thirty or forty in the minute.

Chloralamid succeeds in arresting night-sweats in over half the cases. Thirty to thirty-five grains were given at bedtime. Agaricin gave still better results, controlling the sweating in three-fourths of the trials. One-twelfth grain in pill-form at bed time.

New and Speedy Method of Dilating a Rigid Os in Parturition.—At a meeting of the Obstetrical Society of London, Dr. Farrar, *Lancet*, gave the details of two cases in which he had used a 10 per cent. solution of cocaine as an application to the rigid os. In one case he had applied the cocaine after endeavoring vainly to relax the cervix by means of chloral, bromide of potassium and morphia, and the most persistent attempts at digital and mechanical dilatation, with and without chloroform. He decided upon incising the os, and used the cocaine to this end. After five minutes he introduced the finger as a guide to the scissors, and, to his surprise, found the os widely dilated. In the second case, a primipara, forty-eight years of age, he used every effort, as before, to produce relaxation, and waited three days before making the application of cocaine, which was immediately successful. In four minutes the os had yielded. He considered the dilatation to be due to the cocaine in both cases. Dr. Armand Routh said that Dibbs, of Shankin, had recommended cocaine as relieving the pains of the first stage of labor, and that Mr. Head Moore advised cocaine and boric acid pessaries in cases of rigid os. He himself had found it useful. The president, Dr. G. E. Herman, said that two cases were rather a slender foundation upon which to base a conclusion, but if Dr. Farrar's results were confirmed by further experience, he would have made a valuable addition to our obstetric resources.

Mercuric Chloride in the Treatment of Rhus Poisoning.—I would call attention to the value of corrosive sublimate in the treatment of dermatitis venenata. Dr. Witmer, in *Phila. Polyclinic*. Permit me to cite a case. D. L., aged 28 years, is very susceptible, direct contact with the plant not being necessary to induce a violent eruption. He has yearly attacks of a severe type, frequently lasting for six weeks. He applied for treatment in the early part of May, with the typical eruption on the face and fingers. The patient was given onethirty-second of a grain of mercuric chloride every three hours. Within four days the eruption had entirely disappeared. The topical applications consisted of lead-water and laudanum during the acute stage; of hot water, frequently applied, during the stage of exudation, and of a two per cent. carbolated petrolatum ointment during the stage of desquamation. This case is of interest owing to the rapid convalescence of the patient during a time when the toxic plant (rhus) is particularly virulent.

The Treatment of Locomotor Ataxy.—The use of suspension as a method of treatment in locomotor ataxy is scarcely ever heard of now; many observers claimed for it that it relieved the tightening pains, which form one of the most trying symptoms to the patient, but we believe that,

through its employment, several persons met their deaths by hanging, *Med. Times.* A French physician, Blondel, has suggested and carried into practice a method whereby the advantages of suspension can be obtained without any of its dangers. He has treated a case of locomotor ataxy in a syphilitic man of twenty-nine, who suffered from intolerable tightening pains, as follows:—The patient lay on a bed with the thighs flexed on the abdomen (knees and chin), and the legs upon the thighs. A cord passed round the neck and under the knees enabled him to keep in this position for five minutes. This was repeated every night for eight days, when the pains ceased, to return one month later, when the same treatment was carried on for five nights. The man has had no recurrence, although two years have passed since the treatment. This method seems to bring about the same result as suspension—a slight elongation of the spinal cord. Certainly, it is free from danger, and is decidedly worthy of trial.

A Constant Sign of Commencing Meningitis.—This consists in the inharmonious movements of the chest and diaphragm, *Times and Reg.* It exists from the beginning, and may serve to reveal its cause even in insidious cases, but requires careful searching. The chest and abdomen must be bared, but not suddenly, or the hyperesthetic skin will take on accidental movements from the action of the air. In the first period of meningitis may be seen irregularity of rhythm and inequality of the amplitude of development of the chest. Another sign is the irregular type of respiration and dissociation of the movements of chest and diaphragm. The respiration is effected by the lower respiratory muscles of the chest. Looking at the umbilical region, instead of the normal elevation with each inspiration, there is either immobility or depression. These movements are not connected with the Cheyne-Stokes type of respiration.

Tuberculous Adenoid Vegetations of Naso-Pharynx.—M. Lermoyez, *Ann. des malad. de l'oreille, etc.*, alludes to some experiences with adenoid growths in the naso-pharynx, which, on examination proved to be not lymphatic, but tuberculous in structure. In such cases the removal of the growths gave only a temporary relief; a return soon followed. In one case a rapid development of tubercle of the lungs followed the operation. The writer proposes in all cases where there may be a suspicion as to the tuberculous nature of the adenoid growths to forestall the operation by a histological examination of a test portion and to complete the operation finally by galvano-cautery in order to hinder the entrance of germs into the opened blood vessels. The subject is quite important, but the writer's material was so scanty that further investigation in this direction are earnestly desired.

Chloroform in Phthisis.—Dr. Cuthbert, writing to the *Lancet* says: In reference to Dr. Lee's communication in the *Lancet* for June 15th, I also have noticed good results following chloroform in phthisis and in cases apart from operation, in which, of course, there is room for a fallacy to creep in. In one case the evening rise of temperature disappeared for eight or ten days after each administration. Moreover, I have so often found high fever decline after its use in non-surgical cases that I have resolved to try it in any case of hyper-pyrexia that becomes intractable—pulse permitting.

To Remove Nitrate of Silver Stains.—Hahn recommends the following mixture for this purpose: bichloride of mercury, chlorate of ammonia, each 5 grams, distilled water, 40 grams. The stains are touched with a piece of cloth dipped in this mixture, and then rubbed. The spots, even if of long standing, disappear almost instantly, on woolens, cotton or linen. Stains on the skin may be removed by the same method. They first assume a yellowish-white color and then completely disappear.

Pruritus.—

℞—Mentholis, ... gr. xx.
Zinci stearitis cum bismutho, ℥ i.—M.
Sig.—Ointment. Apply locally.

J. W. Snowden, M.D., A.E., San Jose, California, on April 12th, 1895, writes: Your Bromidia acts like a charm. I believe it a safe, effectual and reliable hypnotic.

Asthma.—Nocturnal attacks are said to be guarded against by hypodermic injections of small doses of strychnia and atropia in combination.

Books and Pamphlets.

Immunity, Protective Inoculations in Infectious Diseases and Serum-Therapy. By George M. Sternberg, M.D., LL.D., Surgeon-General U. S. Army, etc. New York: Wm. Wood & Co. Toronto: Vannevar & Co. 1895.

The author is dealing with what is perhaps the most burning scientific question of the day. Although the treatment of diphtheria with antitoxin has not proved so entirely successful as we all at first hoped for; yet its partial success is an earnest of what we may yet look for in the treatment of all infectious diseases by similar means. Every practising physician and surgeon must be interested, and deeply so, in serum-therapy, and therefore, Dr. Sternberg's work is timely. There have been recently opened up, by bacteriologists, a vista of possibilities in specific treatment, unsuspected a year or two ago. So that every doctor should be *au courant* of this new branch of scientific medicine.

Dr. Sternberg comes to the work very fully equipped. His official position gives him enormous advantages in the study, and his thorough scholarship and scientific attainments peculiarly fit him for this work. And his book is quite as good as we could expect. The science is new, but everything of interest bearing on the subject is here set down.

It is a book no doctor, who wishes to be abreast of the medical progress of the time, and we may say of the most important branch of that progress, can afford to do without.

The Year Book of Treatment for 1895; a Critical Review for Practitioners of Medicine and Surgery. Philadelphia: Lea Brothers & Co. Toronto: Carveth & Co. 1895.

This is the eleventh issue of "The Year Book of Treatment." It comes in its old form, so that those of our readers who know it require no information; but for those who do not, we may say it is a *résumé* of the medical literature of the last year; a sifting of the wheat from the chaff, which will, to a considerable extent, enable the busy practitioner to keep abreast of the progress of the times in all that relates to the treatment of disease. Among the contributors to the present volume we note the names of Dudley W. Buxton, Reginald Harrison, Malcolm Morris, Edmund Owen, Henry Power, and many others whose writings are well known to the medical world.

A Manual of the Modern Theory and Technique of Surgical Asepsis. By Charles Beck, M.D., Visiting Surgeon to St. Mark's Hospital, etc. With 65 illustrations and 12 full-page plates; pp. 306. $1.25 net, cloth. Philadelphia: W. B. Saunders. Toronto: Vannevar & Co. 1895.

The medical and surgical practitioner has heard so much about the whole science having been revolutionized since asepsis came to the fore, that he may think he knows all that is worth knowing about the subject. He may, and probably does know, a deal about it; but he wants to read Dr. Beck's book, to understand to what vast dimensions the "science" of asepticism has grown.

While the book is in the main practical, theory has not been omitted, where it can make plain the technique of modern wound treatment.

We should like to see a similar work on Medical Asepsis, as we believe much could be said on that subject which would be of inestimable value to the physician, as this is to the surgeon.

Dose Book and Manual of Prescription Writing. By E. G. Thornton, M.D., Ph.G., Demonstrator of Therapeutics, Jefferson Medical College, etc. Philadelphia: W. B. Saunders. Cloth, pp. 338. $1.25 net.

This book is a very convenient one for students of medicine, as well as for both young and old practitioners, who can profitably use it as a book of reference.

It gives the composition and strength of all officinal preparations, U.S.P.; solubilities, incompatibles, doses both apothecaries and metric. It also considers the grammatical construction of prescriptions; numerous examples of properly constructed formulæ, and, what should be of great advantage to the student, and to many a practitioner, if we may judge by the Barbarizing we so often hear, the proper pronunciation of all the terms used in pharmacy.

For Pimples and Blackheads. — It is said, *Druggists' Circ.*, that a lotion made by dissolving one drachm of salicylic acid in three ounces of alcohol, applied to these little nuisances, will prove very useful in ending in their removal.

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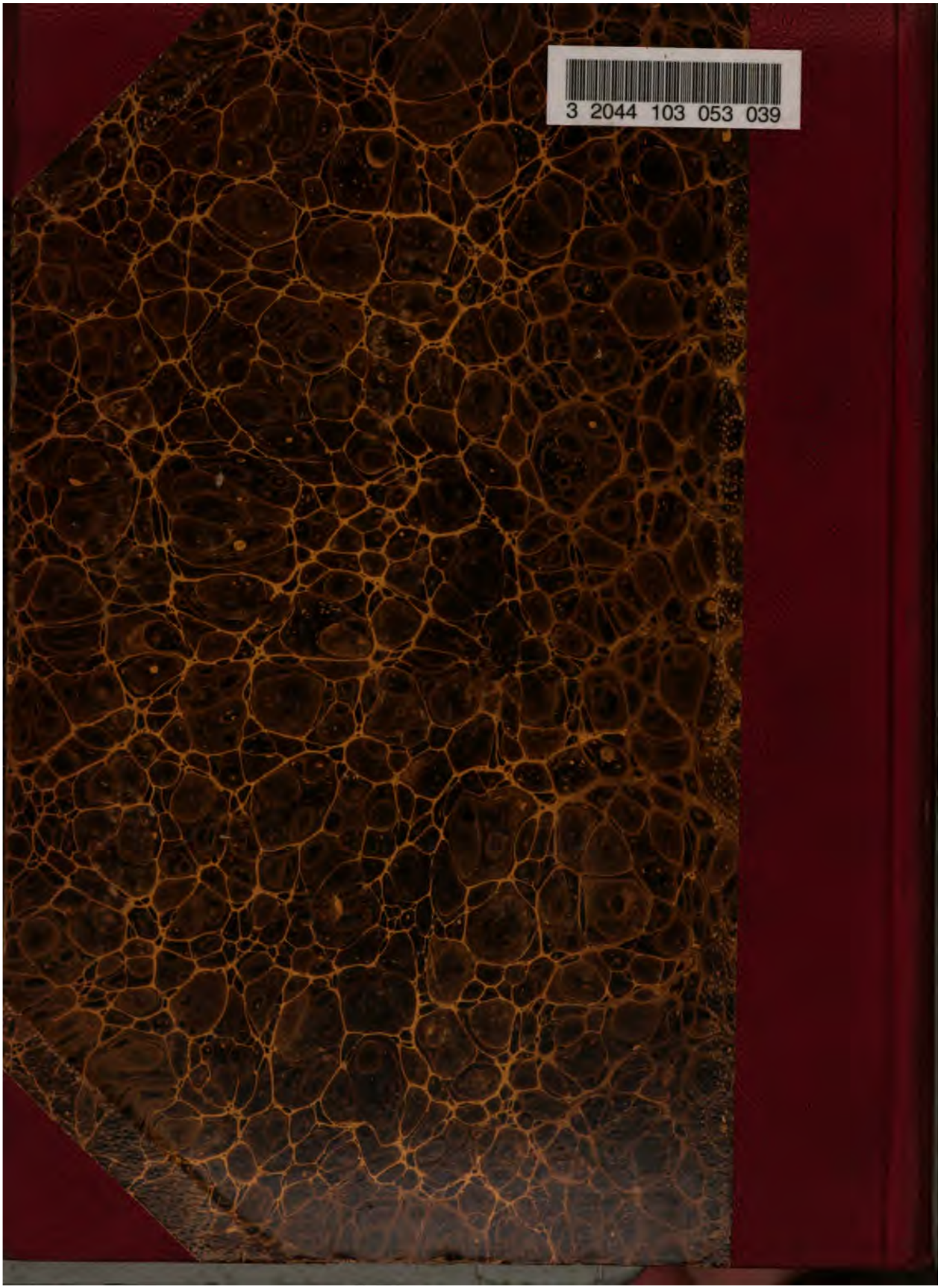
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